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**EXONMobil**Refining & Supply

January 28, 2005

Mr. Jim Tischler California Regional Water Quality Control Board North Coast Region 5550 Skylane Boulevard, Suite A Santa Rosa, California 95403

RE: Former Exxon RAS #7-0276/1400 Farmers Lane, Santa Rosa, California.

Dear Mr. Tischler:

Attached for your review and comment is a copy of the letter report entitled *Corrective Action Plan*, dated January 28, 2005, for the above-referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Petaluma, California, and details evaluation activities for the subject site.

If you have any questions or comments, please contact me at 510.547.8196.

Sincerely,

Jennifer C. Sedlachek Project Manager

Attachment:

ERI's Corrective Action Plan, dated January 28, 2005.

cc: w/ attachment

Mr. Paul Lowenthal, City of Santa Rosa Fire Department Mr. Joseph A. Aldridge, Valero Energy Corporation

w/o attachment

Mr. Robert A. Saur, Environmental Resolutions, Inc.

#### **CORRECTIVE ACTION PLAN**

for

Former Exxon Service Station 7-0276

1400 Farmers Lane

Santa Rosa, California

ERI Job 203405.R23

January 28, 2005

Prepared for
ExxonMobil Refining & Supply – Global Remediation
4096 Piedmont Avenue #194
Oakland, California 94611



CORRECTIVE ACTION PLAN

for

Former Exxon Service Station 7-0276 1400 Farmer's Lane Santa Rosa, California

ERI Job No. 203405.R23

Prepared for

ExxonMobil Refining & Supply – Global Remediation 4096 Piedmont Avenue #194 Oakland, California 94611

by

Environmental Resolutions, Inc.

B.C.

Robert A.

Project Manager

January 28, 2005

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#### CORRECTIVE ACTION PLAN

for

# Former Exxon Service Station 7-0276 1400 Farmer's Lane Santa Rosa, California

For ExxonMobil Refining & Supply - Global Remediation

#### 1.0 INTRODUCTION

At the request of ExxonMobil Oil Corporation (ExxonMobil), Environmental Resolutions, Inc. (ERI) has prepared this Corrective Action Plan (CAP) for the former Exxon Service Station 7-0276, 1400 Farmer's Lane, Santa Rosa, California. The CAP summarizes environmental work performed to date, assesses impacts to the subsurface, evaluates remedial alternatives, and presents an approach for remediating soil and groundwater at this site. The CAP was prepared in response to letter from the California Regional Water Quality Control Board, North Coast Region (Regional Board) dated November 30, 2004 (Appendix A).

#### 2.0 SITE DESCRIPTION

#### 2.1 Setting

The site is located on the southeastern corner of Farmer's Lane and Hoen Frontage Road in Santa Rosa, California, as shown on the Site Vicinity Map (Plate 1). The locations of the existing underground storage tanks (USTs), dispenser islands, groundwater monitoring wells, and other select site features are shown on the Generalized Site Plan (Plate 2). Properties in the vicinity of the site are occupied by commercial developments and California Route 12 and associated ramps.

The site currently has 13 on-site groundwater monitoring wells (MW1 through MW9, MW4A, MW5A, MW16, and MW17), seven off-site groundwater monitoring wells (MW10 through MW15 and MW18), and one groundwater recovery well (RW1A), and four UST observation wells (TP1 through TP4). The well locations are depicted on Plate 2.

The site has been operating as a service station since at least the early 1970s. The site was initially operated by Texaco. The site operated as an Exxon station from August 1988 to June 2000, at which time the property and associated UST system were transferred to Valero Refining Company. The site currently operates as a Valero station.

Local topography slopes towards the north and west from Taylor Mountain toward Matanzas Creek. Matanzas Creek, a tributary of Santa Rosa Creek and the Russian River, is located approximately 0.3 mile north of the site and flows toward the west.

#### <u>2.2</u> **Environmental Assessment**

Environmental assessment activities were initiated at the site in 1988 by Texaco oil Company. ExxonMobil initiated environmental assessment activities at the site in 1998. Historic site assessment activities are summarized in the following.

June 1988	Wells MW1 through MW6 installed. Groundwater monitoring and sampling initiated.
August 1988	Wells MW7 through MW12 installed.
April 1990	Wells MW13 and MW14 installed.
November 1990	Product lines and dispensers replaced; approximately 30 cubic yards of soil
	removed from beneath the north dispenser island.
February 1991	Well RW1 installed.
March 1991	Constant-discharge groundwater pumping test conducted.
November 1995	Air sparge (AS) and groundwater recovery remediation system started.
September 1997	AS and groundwater recovery remediation system shut down.
August 1998	Two-day SVE pilot test conducted.
June 2000	Well MW15 installed; soil boring B17 advanced.

(off-site); borings GP7 and GP8 advanced on site. November 2001 Soil boring B16 advanced on site. December 2001 Soil boring B18 advanced on site. Groundwater recovery well RW1 destroyed and replaced with groundwater August 2003

Sensitive receptor survey (SRS) performed.

Direct-push soil borings GP1 through GP6 advanced in the area near well MW10

recovery well RW1A.

October 2003 Wells MW16 and MW17 installed.

October 2003 24-hour dual-phase extraction (DPE) pilot test conducted.

October 2004 Well MW18 installed.

November 2000

October 2001

## 2.3 Environmental Remediation

A summary of historic site remedial efforts are summarized in the following.

December 1990 Excavation of approximately 30 yards of hydrocarbon-impacted soil from beneath

the northern dispenser island and excavation of approximately 30 yards of

hydrocarbon-impacted soil from the new product line trenches.

November 1995 -

Operation of the AS and groundwater recovery remediation system.

September 1997

#### 2.4 Feasibility Testing

A summary of historic feasibility testing are summarized in the following.

August 1998 SVE

SVE pilot testing, conducted for 48 hours, removed approximately 0.015 pound of

hydrocarbons.

October 2003

DPE pilot testing, conducted for 24 hours, removed approximately 0.022 pound of

hydrocarbons.

December 2004

Natural attenuation parameter investigation conducted.

#### 3.0 SITE CONDITIONS

#### 3.1 Chemicals of Concern

Cumulative results of laboratory analyses of groundwater samples (Tables 1A and 1B) and soil (Tables 2A and 2B) indicate that gasoline-range and diesel-range fuel hydrocarbons and related constituents are present in soil and groundwater underlying the site. ERI has identified the following constituents as chemicals of concern (COCs): diesel hydrocarbons (quantitated as total petroleum hydrocarbons as diesel [TPHd]); gasoline hydrocarbons (quantitated as total petroleum hydrocarbons as gasoline [TPHg]); benzene, toluene, ethylbenzene, and xylenes (BTEX); and methyl tertiary butyl ether (MTBE). Select physical, chemical, and toxicological properties of these COCs are summarized in Appendix B. The aerobic decay rates for the COCs in saturated soil and unsaturated soil are also provided in Appendix B.

Cumulative groundwater monitoring and sampling data indicates that the highest historic concentration of TPHg in on-site and off-site wells was 85,000 ug/L in well MW3 on January 19, 1991, and 77,000 ug/L in well MW10 on April 30 1992, respectively. The highest historic concentration of benzene in on-site and off-site wells was 2,500 ug/L in well MW3 on April 23, 1991, and 29,000 ug/L in well MW10 on

April 30, 1992, respectively. The highest historic concentration of MTBE in on-site and off-site wells was 15,000 ug/L in well MW3 on March 26, 2001, and 3,960 ug/L in well MW15 on March 26, 2002.

Results of the most recent groundwater monitoring and sampling event (December 15, 2004) indicated that the maximum concentration of TPHg in on-site and off-site wells is 4,380 ug/L in well MW3, and 9,120 ug/L in well MW10, respectively. The maximum concentration of benzene in on-site and off-site wells is 86.0 ug/L in well MW3, and 705 ug/L in well MW10, respectively. The maximum concentration of MTBE in on-site and off-site wells is 43.2 ug/L in Well MW3, and 13.6 ug/L in well MW15, respectively.

Based on the current concentration of the COCs, it appears that benzene, toluene, ethylbenzene, and MTBE exceed water quality goals established by the North Coast Regional Board. Comparison of COC representative concentrations and COC current concentrations to groundwater cleanup objectives are shown in Table 3.

#### 3.2 Site Geology and Hydrogeology

The site is located at the northeast border of the Santa Rosa Plain groundwater basin, just south of the Santa Rosa Valley groundwater basin. Based on the results of previous assessment activities, the site and vicinity is underlain by a heterogeneous mixture of sand, silt, clay, and gravel from ground surface to 60 feet below ground surface (bgs), the maximum depth explored. A layer of finer-grained sediment (silt with sand and sandy silty clay), observed in MW16 and MW17, appears to retard vertical migration of dissolved hydrocarbons. Boring logs are provided in Appendix C.

Groundwater monitoring wells MW1 through MW15 are screened above 20 feet bgs. Groundwater monitoring wells MW16, MW17, and MW18 are screened below 40 feet, in deeper sediments, to evaluate and monitor the vertical extent of dissolved hydrocarbons. The depth to groundwater beneath and in the vicinity of the site has historically ranged between approximately 0 to 11 feet bgs; the average depth to groundwater is approximately 22 feet bgs. The predominant groundwater flow direction is towards the northwest, with a hydraulic gradient of approximately 0.03. A rose diagram depicting historic groundwater flow directions and gradient for the first quarter 2003 through fourth quarter 2004 monitoring and sampling events is provided on Plate 3.

Using the calculated hydraulic conductivities of 1.07 and 0.00005 m/day from the March 1991 groundwater pumping test, and an average hydraulic gradient of 0.03, ERI calculated a seepage velocity of 3.7X10^-5 cm/sec (0.1 ft/day) and 1.7 X10<sup>-9</sup> cm/sec (4.9X10<sup>-6</sup> ft/day).

# 3.3 Distribution of Residual Petroleum Hydrocarbons in Soil

Cumulative depths to water measurements (Table 1A) indicate that the depth to groundwater has ranged from 0 to 11 feet. The average depth to groundwater for all measurements is approximately 2.2 feet bgs, and the depth to groundwater has been less than 5 feet bgs in 96% of all measurements. These data show that the vadose zone is generally shallow, and that former and existing primary sources of fuel hydrocarbons (the UST systems and product piping) are most often submerged in groundwater.

Cumulative results of soil samples analyses (Tables 2A and 2B; Plate 4) indicate that residual fuel hydrocarbons were identified in soil or sediment near well MW3 during installation in 1988, and in soil underlying the former northern dispenser island during UST and piping replacement in November 1990. Soil underlying the former dispenser islands was removed by excavation; therefore, this potential secondary source of dissolved hydrocarbons was also removed. Residual hydrocarbons have also been identified in off-site, direct-push boring GP5 at depths of 4 and 5 feet bgs; however, depth to water measurements in nearby well MW10 indicate that the depth interval between 4 to 5 feet bgs has been historically submerged since monitoring was initiated in 1988.

# 3.4 Occurrence of Liquid-Phase Hydrocarbons on Groundwater and In Saturated Soil

Liquid-phase gasoline hydrocarbons (LPH, as sheen or measurable thicknesses) have been reported intermittently between March 1993 and June 2003 in wells MW3, MW5, and MW10. During the intermittent occurrences of LPH, the depths to groundwater in these wells ranged from 0 (artesian conditions) to approximately 3.5 feet bgs. Therefore, adsorption of LPH to sediment within this depth interval most likely occurred, and soil within this interval may represent a secondary source of dissolved-phase hydrocarbons in groundwater. Separate phase fluids have also been observed intermittently in well MW6 from September 1988 through July 1995; however, the chemical characteristics and concentrations of TPHg and BTEX in this well are not consistent with the presence of separate phase fuel hydrocarbons, and ERI concludes that the observed separate phase fluids were not associated with gasoline.

# 3.5 <u>Distribution and Mass of Dissolved-Phase Petroleum Hydrocarbons in Groundwater</u>

Cumulative results of laboratory analyses of groundwater samples collected from groundwater monitoring wells are provided in Table 1A and Table 1B, and results of laboratory analysis of grab groundwater samples collected from soil borings are provided in Appendix D. Variations in groundwater elevations and dissolved-phase concentrations in select wells are depicted on Graphs 1 through 5.

Based on the spatial distribution, historical concentration variations, and chemical characteristics, ERI has identified two distinct modes of occurrence of dissolved-phase gasoline hydrocarbon and related constituents:

- (1) An occurrence of dissolved-phase gasoline hydrocarbons characterized by elevated TPHg and BTEX concentrations, and MTBE concentrations generally less than 100 ug/L. This occurrence has been present since installation of the initial monitoring wells in 1988. Historically, dissolved gasoline hydrocarbons with these characteristics have historically occurred in areas downgradient from the original USTs and dispensers (wells MW1, MW3, MW5, and MW8). This occurrence has been adequately delineated downgradient by wells MW12, MW13, MW14, and MW15; and upgradient and crossgradient by other wells. These dissolved-phase hydrocarbons are delineated vertically by wells MW16 and MW17. Dissolved-phase hydrocarbons with similar chemical characteristics have also been present in off-site well MW10, located approximately 200 feet northwest of the site (downgradient) across the traffic intersection. Dissolved-phase hydrocarbons identified in this area were adequately delineated downgradient by direct-push borings GP1, GP2, and GP3, and are vertically delineated by well MW18.
- (2) An occurrence of dissolved-phase gasoline hydrocarbons characterized by elevated MTBE concentrations exceeding 1,000 ug/L. MTBE concentrations associated with this occurrence showed a distinct increase beginning in or before 1999. Concentrations increased from initial concentrations (less than 100 ug/L in wells MW1 and MW5, and less than 1,000 ug/L in well MW3) to peak concentrations (exceeding 1,000 ug/L in wells MW1, MW5, and MW15; and 10,000 ug/L in well MW3) in late 2000 and 2001, and showed steady decreases after peak concentrations (Graphs 1 through 5). The timing of peak concentrations occurred progressively from wells MW5 to MW3 to MW15. BTEX concentrations showed steady decreasing trends during this time interval.

ERI concludes that the dissolved-phase hydrocarbons near off-site well MW10 most likely result from transport in shallow preferential pathways (utility trenches, roadbase, etc.) rather than advective transport in deeper saturated sediments, based on the following:

- The spatial and temporal variations in concentrations and chemical characteristics.
- The timing of the appearance of liquid-phase hydrocarbons (as sheen or measurable thickness) in on site wells MW3 and MW5 and off site well MW10.
- The low to non-detectable concentrations of BTEX and TPHg in wells MW13 and MW15, located between well MW10 and potential source areas.
- The shallow depth to groundwater, which restricts vertical migration of LPH.

MTBE was generally not present in reportable concentrations in samples from downgradient well MW10 from late 2000 through mid-2004; however, low concentrations began to show up in mid-2004.

Isoconcentration maps showing the lateral extent of dissolved-phase TPHd, TPHg, benzene, and MTBE for the most recent monitoring and sampling event are shown as Plates 5 through 8, respectively. These maps show that:

- The current TPHg, benzene, and MTBE concentrations occur predominantly on site (centered on wells MW3 and MW8) and underneath Hoen Frontage road, and are adequately delineated downgradient by wells MW8, MW12, MW13, and MW15.
- A separate area of elevated TPHg and benzene concentrations occurs across the traffic intersection northwest of the site, near well MW10.

Based on the current distribution of dissolved TPHd, TPHg, benzene and MTBE, ERI estimated the mass of those constituents dissolved in groundwater (Appendix E). The results of the calculations are summarized in Table 4, and indicate:

- Approximately 4.22 lb of dissolved-phase TPHd are present on-site and under Hoen Frontage Road; approximately 1.9 lb of TPHd is present off site, in the area near well MW10.
- Approximately 5.20 lb of dissolved-phase TPHg are present on-site and under Hoen Frontage Road; approximately 17.9 lb of TPHg is present off site in the area near well MW10.
- Approximately 0.42 lb of dissolved-phase MTBE is present on-site and under Hoen Frontage Road; approximately 0.02 lb of MTBE is present off site in the area near well MW10.
- Approximately 0.10 lb of dissolved-phase benzene is present on-site and under Hoen Frontage Road; approximately 1.4 lb of benzene is present off site in the area near well MW10.

To evaluate the stability of dissolved-phase benzene and MTBE in on-site areas, ERI generated a map showing the temporal variations for specific benzene and MTBE isoconcentration contours using the results of the first quarter groundwater monitoring and sampling events from 1991 to 2004 (Plates 9 and 10, respectively). Based on the position of the respective isoconcentration contours ERI concludes that the areal extent of the on-site benzene and MTBE concentrations are decreasing.

#### 3.6 Source Areas

The distribution of residual and dissolved gasoline hydrocarbons in soil and groundwater indicate the following:

- The USTs and dispensers appear to have been the primary source of dissolved hydrocarbons in groundwater; these primary sources have been abated.
- Because of the shallow depth to groundwater underlying the site, the vertical extent of vadose sediment is limited, and thus residual hydrocarbons in vadose soil do not currently represent a secondary source of dissolved hydrocarbons to groundwater.
- Soil containing residual hydrocarbons in vadose or saturated soil detected beneath the northern dispenser islands was removed by overexcavation.
- It is possible that LPH intermittently detected between March 1993 and September 1999 in
  monitoring wells MW3, MW5, and MW10 adsorbed to sediment during seasonal groundwater
  fluctuations; these adsorbed hydrocarbons may represent a potential secondary source of
  dissolved hydrocarbons to groundwater in restricted locations.

#### 3.7 Sensitive Receptors

In November 2000, ERI performed an SRS, which included a comprehensive well search within a one-quarter mile radius of the site and a field visit. ERI updated the SRS in March 2004 and will conduct additional updates annually. Results of the SRS, including location and details of water supply wells in the vicinity of the site and utility vault and storm drain locations beneath and in the vicinity of the site are provided in Appendix F. Results of the SRS indicate that the closest water supply well to the site is located approximately 1,125 feet north-northwest of the site. The closest surface water to the site is Matanzas Creek, located 1,386 feet north of the site. In addition, standing water occurs seasonally in a topographic low approximately 100 feet north of well MW10.

# 3.8 Current and Potential Beneficial Uses of Surface and Groundwater

According to the Regional Board's Basin Plan, the subject site is located in the Santa Rosa Subarea of the Middle Russian River Hydrologic Area of the Russian River Hydrologic Unit. The current and potential beneficial uses of surface and groundwater for the Santa Rosa subarea are provided in Appendix G. The area has been designated as having potential municipal supply use, and as having existing agricultural, industrial, irrigation, and other uses.

#### 4.0 FEASIBILITY STUDIES

# 4.1 Natural Attenuation Parameter Investigation

#### 4.1.1 Fieldwork and Methods

During the fourth quarter 2004 monitoring event conducted on December 15, 2004, ERI evaluated four categories of NAIs: physical properties, nutrients, electron acceptors (reactants), and by-products. ERI monitored and recorded the physical parameters of temperature, pH, conductivity, and oxidation-reduction potential (ORP) in 17 groundwater monitoring wells using calibrated meters. ERI measured and recorded the ferrous iron concentration (a by-product) using a colorimetric analysis kit; and measured and recorded dissolved oxygen and carbon dioxide (electron acceptors) using a meter and titration kit, respectively. ERI also collected groundwater samples from nine monitoring wells for laboratory analyses of select nutrients, electron acceptors and by-products. The laboratory analysis report and Chain-of-Custody record are included as Appendix H. The results of field measurements, field analyses, and laboratory analysis are presented in Table 5 and shown on Plate 11.

#### 4.1.2 Laboratory Analysis

ERI collected and submitted groundwater samples collected from nine groundwater monitoring wells to California state-certified laboratories, under Chain-of-Custody protocol. The samples were analyzed for:

- Nutrients, including ammonia-nitrogen, ortho-phosphate, phosphorous, total nitrogen, and total Kjeldahl nitrogen (TKN).
- Potential electron acceptors, including nitrate (NO<sub>3</sub>) and sulfate (SO<sub>4</sub><sup>2</sup>-).
- By-products, including methane (CH<sub>4</sub>) and sulfide.

#### 4.1.3 Results

ERI compared the results of the NAI analyses conducted on samples collected from monitoring wells in areas with groundwater containing relatively high concentrations of dissolved-phase hydrocarbons to results of analyses from samples collected from wells in areas with lower concentrations. ERI considered groundwater monitoring wells MW1, MW3, MW5, MW8, and MW10 to be inside the area of dissolved-phase hydrocarbons of the upper water-bearing zone, and wells MW2, MW4, MW6, MW7, MW9, MW12, MW13, and MW14 to be outside the area of dissolved-phase hydrocarbons of the upper water-bearing zone. Monitoring wells MW16 through MW18 are screened in deeper sediments.

#### 4.1.3.1 Physical Parameters

The temperature, pH, ORP, and conductivity measured by ERI in the field are acceptable for the natural degradation of petroleum hydrocarbons. ORP concentrations are lowest in wells with the highest concentration of dissolved hydrocarbons (MW3, MW5, MW8, MW10, and MW18) and highest in wells in which COCs have not been present historically (MW4, MW6, MW7, MW9, MW13, MW14, and MW17). The spatial relationship of ORP to the dissolved-phase plume indicates that natural aerobic degradation has occurred.

#### 4.1.3.2 Nutrients

Ortho-phosphate, nitrogen, and phosphorous are present in sufficient concentrations to support biodegradation.

#### 4.1.3.3 Electron Acceptors

The dissolved oxygen concentrations ranged from 0.85 to 3.8 milligrams per L (mg/L), and were generally higher in wells outside the area of dissolved-phase hydrocarbons than in the wells inside the area of dissolved-phase hydrocarbons. The minimum value (0.85 mg/L was measured in well MW3), was measured in the area of greatest dissolved-phase concentrations. The range of values measured in other areas (up to 3.8 mg/L) are generally considered conducive for aerobic microbial processes. The occurrence of low concentrations in the area of highest COC concentrations and higher concentrations in areas of no or lesser impact indicates that dissolved oxygen is consumed during biodegradation. The concentrations of nitrate are highest in wells outside the area of dissolved-phase hydrocarbons, and are generally below reporting limits inside the area of dissolved-phase hydrocarbons of upper and lower water-bearing units, than inside the area of dissolved-phase hydrocarbons. These spatial relationships may indicate that anaerobic microbial processes have also occurred.

#### 4.1.3.4 By-Products

Carbon dioxide concentrations are generally highest in wells with the highest concentrations of dissolved hydrocarbons, indicating that this by-product in a result of biodegradation. In addition, it appears that wells with the highest concentrations of dissolved hydrocarbons have the highest concentrations of ferrous iron and methane, indicating that these by-products are the result of biodegradation. Concentrations of sulfide are predominantly below laboratory reporting limits, indicating that sulfide is not a product of biodegradation at this site.

#### 4.1.3.5 Estimated Attenuation Rates

ERI calculated the decay rate for dissolved benzene, toluene, ethylbenzene and MTBE for wells in which current concentrations (as reported during the fourth quarter 2004 monitoring event) exceed the water quality objective for groundwater used for domestic or municipal supply, as listed in Table 3-2 of the Regional Board's Basin Plan or the primary maximum contaminant level (MCL): wells MW3, MW5, and MW10 for benzene; well MW10 for benzene, toluene and ethylbenzene; and wells MW3, MW5, and MW8 for MTBE. Using the hydrographs for the respective wells, ERI identified the concentration trends for benzene and MTBE. Using these trends, ERI calculated the decay constants assuming first-order exponential decay. The benzene decay constants calculated based on the concentration trends observed at the site indicate that benzene concentrations will reach the water quality objective (1 ug/L) in approximately 20.3 years in well MW3, 8.3 year in well MW5, and 29.9 years in well MW10. The calculations for toluene indicate that toluene in well MW10 will reach the primary MCL (150 ug/L) in approximately 4 years. The calculations for ethylbenzene indicate that toluene in well MW10 will reach the primary MCL (300 ug/L) in approximately 8.5 years. The MTBE decay constants calculated based on the concentration trends observed at the site indicate that MTBE concentrations will reach the water quality objective (13 ug/L) in approximately 0.8 year in well MW3 and 2.9 years in well MW8.

#### 4.2 Pumping Test

The results of a constant-rate groundwater pumping test conducted in March 1991, using well RW1 as the extraction well, indicate that the calculated transmissivity ranges from 2.25 to 10.75 m³/day, the calculated conductivity ranges from 1.07 to 0.00005 m/day, and the calculated storativity ranges from 0.0019 to 0.0039.

#### 4.3 Soil Vapor Extraction Test

ERI conducted a SVE test in August 1998; the test was conducted using wells MW3 and RW1 as extraction wells. Prior to the test, well RW1 was pumped to attempt to lower the groundwater elevation and expose previously saturated sediment of the induced vacuum. The results of the SVE test (ERI, March 15, 1999) indicate:

- Depth to water measurements in observation wells indicate that groundwater extraction from well RW1 did not lower the groundwater surface enough to expose well casing screens in the observation wells.
- With an applied vacuum of 85 inches of water on wells MW3 and RW1, a measurable vacuum was not induced in the observation wells, and vapor flow rates were negligible.

#### 4.4 <u>Dual-Phase Extraction Test</u>

The results of a 24-hour the DPE test conducted in October 2003 (ERI, May 21, 2004) indicate the following:

- An induced vacuum of 22" Hg produced an effective vacuum radius of influence (ROI) of approximately 32 feet.
- ERI estimates a sustainable liquid-phase flow rate during DPE of 1.6 gpm, an associated downgradient capture zone for a single groundwater recovery well of up to approximately 190 feet, and a lateral extent of the capture zone up to approximately 597 feet.
- ERI estimates that approximately 0.02 pound of gasoline hydrocarbons (as TPHg) and 0.001 pound of MTBE were removed as vapor phase during the test; approximately 0.002 pound of TPHg and 0.005 pound of MTBE were removed as dissolved-phase during the 24-hour DPE test.

#### 5.0 EVALUATION OF REMEDIAL ALTERNATIVES

#### 5.1 Groundwater Cleanup Objectives

ERI proposes to apply the water quality objectives for groundwater used for domestic or municipal supply as listed in Table 3-2 of the Regional Board's Basin Plan (Appendix G) as clean-up objectives. These objectives are consistent with the existing and potential beneficial uses of groundwater and surface water in the area. Comparison of COC representative concentrations to groundwater cleanup objectives are shown in Table 3.

#### 5.2 Targets for Remedial Action

Based on the cumulative results of assessment activities and feasibility studies, current and historical COC concentrations and distributions, and cleanup objectives, ERI has identified the following areas and COCs as targets for remediation:

- Dissolved benzene and MTBE in shallow groundwater underlying the site and Hoen Frontage Road. The current maximum benzene concentration in this area is 86 ug/L. The current maximum MTBE concentration in this area is 116 ug/L.
- Dissolved benzene and gasoline-range hydrocarbons (quantitated as TPHg) in shallow groundwater in the area downgradient from the site, near well MW10. The current benzene concentration in well MW10 is 705 ug/l, and current TPHg concentration is 9,120 ug/L; MTBE concentrations have historically been below detection limits, although low concentrations (below 16 ug/L) have been present in the last three monitoring events. Based on the current dissolved

benzene concentration and the estimated time necessary to reach water quality goals, ERI also considers possible adsorbed hydrocarbons in shallow vadose and saturated soil (to approximately 5 feet bgs) near off-site well MW10 to be a potential remedial target.

#### 5.3 Remedial Alternatives for On-site Groundwater

For on-site soil and groundwater, ERI evaluated four remedial alternatives for this CAP: 1) soil vapor extraction; 2) groundwater extraction and treatment; 3) dual-phase extraction; and 4) monitored natural attenuation (MNA). Estimated operation times required for the respective alternatives to result in groundwater that meets water quality goals, and the estimated associated costs, are summarized in Table 6.

#### 5.3.1 Soil Vapor Extraction

SVE involves extracting soil vapor, including vapor-phase petroleum hydrocarbons, from vadose sediment by inducing a vacuum at the extraction points. SVE is generally considered an effective technology for remediating residual petroleum hydrocarbon-impacted soil, and has an indirect affect on groundwater by abating a continued secondary source of dissolved hydrocarbons to groundwater.

ERI estimated the costs for design, installation, and operation and maintenance of an SVE system at the site (Table 6) based on our previous experience with similar sites. However, based on the following observations, ERI does not consider SVE an appropriate remedial technology for the site, and did not estimate site-specific costs:

- Cumulative monitoring data indicate groundwater occurs at shallow depths and the corresponding vadose zone is generally thin (average thickness less than 2.2 feet).
- The former and existing primary sources of dissolved-phase hydrocarbons to groundwater are most often submerged by groundwater.
- The shallow depth to groundwater has limited the downward migration of LPH and the resulting mass of residual hydrocarbons in shallow groundwater-saturated is soil therefore very small.
- SVE systems do not perform well in shallow soil due to short-circuiting within the shallow soilvapor flow regime.

### 5.3.2 Groundwater Extraction and Treatment

GET involves pumping impacted groundwater from one or more groundwater extraction wells, treatment of groundwater aboveground, and discharge into the storm sewer under a National Pollutant Discharge Elimination System (NPDES) permit, or into the sanitary sewer under a local agency permit. GET generally results in COC mass removal and migration control of hydrocarbon-impacted groundwater.

Target COCs at this site include benzene and MTBE. MTBE concentrations have shown sharply declining trends since peak concentrations in 2000 and 2001. Benzene has shown declining concentration trends, but at slower rates due to the higher sorption coefficient for benzene in saturated soil.

ERI estimated that a GET system will require operation for approximately five years to lower existing dissolved COC concentrations on site to water quality goals, based on the following:

- The estimated area of impacted saturated sediment and volume of impacted groundwater within the sediment underlying the site and Hoen Frontage Road;
- That removal of approximately 30 pore-space volumes of groundwater is generally considered necessary to successfully remediate COCs with sorption coefficients of BTEX compounds; and
- The calculated sustainable pumping rate based on the groundwater pumping test results.

ERI estimated the costs for design, permitting, construction and installation, and operation and maintenance of a GET system based on the following:

- Estimated design costs based on ERI's previous experience with similar systems, and sitespecific features;
- The estimated capital costs for equipment and materials, including: pumps, conveyance piping and manifolds, abatement equipment; and a remediation compound;
- The estimated construction costs for the remediation compound and containment, an additional extraction well, conveyance piping trenching; GET system components and monitoring equipment;
- Routine start up and routine operation and maintenance costs for approximately five years.

Based on these criteria and associated costs, ERI estimates that design, installation and operation and maintenance of a GET system on site will cost approximately \$475,000.

#### 5.3.3 Dual-Phase Extraction

High-vacuum DPE uses simultaneous extraction of soil vapor and groundwater from the same extraction well using high vacuum. Groundwater is extracted from a well through a down-hole hose or pipe, resulting in migration control and dissolved-phase mass removal. The depressed water level also exposes more previously-saturated sediments to high-vacuum SVE, which allows removal of vapor-phase hydrocarbons and reduces residual hydrocarbon concentrations. A high-vacuum DPE system generates a greater radius of vacuum influence around a DPE well than conventional SVE or low-vacuum DPE systems. The use of DPE is also generally considered to enhance natural degradation of adsorbed hydrocarbons in vadose sediment; however, ERI estimates that the mass of adsorbed LPH at this site is very small due to the historically shallow groundwater. Using the calculated effective vacuum ROI of approximately 32 feet (based on DPE pilot test results), approximately 10 DPE wells will be required to effectively remediate the area of the dissolved-phase benzene and MTBE impact on site and underlying Hoen Frontage Road.

ERI estimates that a high-vacuum DPE system will require operation for approximately four years to lower existing dissolved COC concentrations on site to water quality goals, based on the following:

- The estimated area of impacted saturated sediment and volume of impacted groundwater within the sediment underlying the site and Hoen Frontage Road.
- That removal of approximately 30 pore-space volumes of groundwater is generally considered necessary to successfully remediate COCs with sorption coefficients of BTEX compounds.
- The calculated sustainable groundwater removal rate based on the groundwater pumping test results.

ERI estimated the costs for design, permitting, construction and installation, and operation and maintenance of a DPE system based on the following:

- Estimated design costs based on ERI's previous experience with similar DPE systems, and sitespecific features.
- The estimated capital costs for equipment and materials, including: conveyance piping and manifolds, abatement equipment; and a remediation compound.
- The estimated construction costs for the remediation compound and containment, 10 DPE wells;
   conveyance piping trenching; DPE system components and monitoring equipment.
- Routine start up and routine operation and maintenance costs for approximately four years.

Based on these criteria and associated costs, ERI estimates that design, installation and operation and maintenance of a GET system on site will cost approximately \$555,000.

#### 5.3.4 Natural Attenuation

Natural attenuation includes physical processes such as dispersion, advection, and diffusion; biological processes such as oxidation and reduction; and chemical processes such as sorption. Based on the results of the natural attenuation parameter investigation, natural attenuation processes are occurring at the site and viable remedial alternative for the site.

ERI estimates that natural attenuation will require approximately 20 years for existing dissolved benzene concentrations on site to reach water quality goals, and approximately three years for existing dissolved MTBE concentrations on site to reach water quality goals, based on decay rates observed in existing monitoring wells.

ERI estimated the costs for implementing MNA design based on the following:

- Lateral and vertical delineation are adequate; additional monitoring wells are not required;
- Groundwater monitoring of onsite wells will occur initially on a quarterly basis for approximately
  two years to verify natural attenuation is continuing to occur; thereafter, monitoring will occur on a
  semi-annual or annual schedule, and the number of wells monitored will be reduced as
  appropriate.

Based on these criteria and associated costs, ERI estimates that implementation of MNA to address on site dissolved benzene and MTBE will cost approximately \$165,000.

#### 5.4 Remedial Alternatives for Off-Site Soil and Groundwater

The second target area for remediation includes the northwest corner of the intersection of the California Route 12 off ramp and Farmer's Lane, approximately 200 to 250 feet west-northwest of the former on site source areas, near off-site well MW10. This area is currently undeveloped and is currently within the California Department of Transportation (CalTrans) right-of-way. It is ERI understands that additional highway construction in this area is pending. To ERI's knowledge, there is no source of electrical power, sanitary sewer discharge, or storm drain on or immediately adjacent to this area. The target area has no buildings or surface pavement, and surface runoff collects in a topographic low approximately 100 feet north of well MW10 during rainy periods seasons.

The lack of electrical power and access to sewer discharge, and restrictions related to CalTrans ownership and potential pending construction, restrict viable remedial options for this area. In ERI's opinion, construction of long-term or semi-permanent structures (e.g., a remediation compound,

secondary containment) is not feasible. Therefore, for this area, ERI evaluated remedial technologies that do not require construction of semi-permanent structures. For and groundwater and soil in this off-site area, ERI evaluated three remedial alternatives for this CAP: 1) limited excavation and MNA; 2) short-duration DPE (source removal) and MNA; and 3) monitored natural attenuation. Estimated costs and operation times required for the respective methods to result in groundwater that meets water quality goals, and the estimated associated costs, are summarized in Table 6.

#### 5.4.1 Excavation and Natural Attenuation

The results of laboratory analyses of soil samples collected from this area (Table 2; Plate 4) indicate that residual gasoline hydrocarbons (TPHg) and benzene were present in soil samples collected from boring GP5. In addition, the previous occurrence of sheen and LPH in well MW10 and seasonal groundwater fluctuation may have resulted in adsorbed hydrocarbons to shallow soil in the area, which may provide a secondary source of dissolved-phase hydrocarbons to groundwater. ERI therefore evaluated excavation of soil and subsequent MNA as a remedial alternative for this area.

Based on the distribution of soil with reported detections of residual hydrocarbons (Plate 4; boring GP5, well MW10), ERI conservatively estimates that an area approximately 20 feet by 25 feet is underlain by soil that may contain residual hydrocarbons. Based on the detection of residual hydrocarbons at depths of up to five feet bgs, ERI estimates the depth of excavation to be five feet, resulting in approximately 95 cubic yards of soil. However, because of the shallow depth to groundwater, dewatering of the excavation will be required. ERI estimates that dewatering will produce approximately 60,000 to 70,000 gallons of groundwater that will require transportation and off site disposal. In additional, the proximity of the excavation to the California Route 12 off ramp may require the use of shoring to prevent potential caving of the roadway. Implementation of this alternative is contingent on acquisition of access and authorization by CalTrans.

After removal of the possible secondary source, ERI estimates that the existing dissolved benzene concentration would decay to water quality goals in approximately 20 years.

ERI estimated the costs for permitting, excavation, dewatering and soil and water disposal based on the following:

 Excavation of an area approximately 20 feet by 25 feet, to a depth of 5 feet, resulting in approximately 95 cubic yards (approximately 140 tons) of soil; backfilling and compaction to CalTrans specifications.

- Generation, storage, and disposal of approximately 140 tons of soil and 60,000 to 70,000 gallons of impacted groundwater.
- MNA for approximately 20 years.

Based on these criteria and associated costs, ERI estimates that implementation of excavation and MNA to address the off site target area will cost approximately \$300,000.

# 5.4.2 Short-Duration DPE (Source Removal) and Natural Attenuation

ERI also evaluated short-duration DPE to lower the groundwater level and reduce concentrations of residual hydrocarbons in the impacted area that may provide a secondary source, followed by natural attenuation. Because of the lack of electrical power and discharge points, use of DPE would require a portable, self-contained DPE unit and storage of the removed and treated groundwater pending transportation and disposal. To optimize the short-duration source removal effort, ERI considered a DPE system with two extraction points: existing well MW10, and an additional extraction point to be installed. Implementation of this alternative is contingent on acquisition of access and authorization by CalTrans.

After removal of the possible secondary source, ERI estimates that the existing dissolved benzene concentration would decay to water quality goals in approximately 20 years.

ERI estimated the costs for this alternative based on the following:

- Successful acquisition of access and encroachment permits from CalTrans.
- Installation of one additional extraction well.
- Construction of temporary, above-ground conveyance piping and security fencing, and running a
  portable, self-contained DPE unit for approximately three to four months.
- Storage and batch disposal of extracted groundwater; ERI estimates that approximately 1,100,000 gallons of groundwater would be generated, treated, stored temporarily on site, and transported off site for disposal.
- MNA for approximately 20 years.

Based on these criteria and associated costs, ERI estimates that implementation of short-duration DPE and MNA to address the off-site target area will cost approximately \$260,000.

#### 5.4.3 Natural Attenuation

ERI estimates that natural attenuation in the off site area will require approximately 30 years for existing dissolved benzene concentrations on site to reach water quality goals, approximately four years for existing dissolved toluene concentrations to reach water quality goals, and approximately eight years for existing dissolved ethylbenzene concentrations to reach water quality goals, based on decay rates observed in existing monitoring wells.

ERI estimated the costs for implementing MNA design based on the following:

- One additional monitoring well will be installed downgradient from MW10 to monitor the lateral extent of dissolved benzene;
- Groundwater monitoring of off site wells will occur initially on a quarterly basis for approximately
  two years to verify natural attenuation is continuing to occur; thereafter, monitoring will occur on a
  semi-annual or annual schedule.

Based on these criteria and associated costs, ERI estimates that implementation of MNA to address off-site dissolved benzene, toluene and ethylbenzene will cost approximately \$237,000.

### 6.0 PROPOSED CORRECTIVE ACTION

ERI evaluated the identified remedial alternatives based on viability, cost effectiveness, and estimated time for attainment of water-quality goals. To evaluate the viability, ERI considered the following site conditions:

- The dissolved TPHg and BTEX, and MTBE occurrences are adequately delineated laterally and vertically. Concentration trends in on-site monitoring wells show steady decreasing trends. TPHg and benzene concentrations in off-site well MW10 (approximately 200 feet downgradient from the site) also show decreasing trends.
- Groundwater underlying the site and adjacent areas is generally very shallow (the average depth
  to groundwater is 2.2 feet bgs); residual hydrocarbons in shallow vadose sediment do not
  represent a secondary source of dissolved-phase hydrocarbons to groundwater.
- Adsorbed gasoline hydrocarbons near wells MW3, MW5, and MW10 may represent a secondary source. However, dissolved TPHg, benzene, and MTBE concentrations in on-site wells show decreasing trends and the areal extent of the on-site area underlain by groundwater with COC constituents in excess of water quality goals is steadily decreasing.

- Conditions in the vadose and saturated sediment are conducive for natural attenuation, and
  natural attenuation is most likely occurring, as indicated by the results of the natural attenuation
  feasibility test. Based on the current concentrations and estimated decay rates, groundwater on
  site will reach groundwater cleanup objectives in approximately 20 years, and groundwater in the
  off-site area will reach water quality goals in approximately 30 years.
- The anticipated land use of the site and the area downgradient from the site is not expected to change; the off-site area near well MW10 will most likely be covered by freeway construction.

Based on the demonstrated viability, cost effectiveness, time required to reach water quality goals, and anticipated land usage and sensitive receptors, ERI concludes that monitored natural attenuation is the preferred corrective action for both the on-site and off-site areas.

#### 7.0 LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This report has been prepared for ExxonMobil, and any reliance on this report by third parties shall be at such party's sole risk.

#### 8.0 REFERENCES

Environmental Resolutions, Inc. (ERI). March 15, 1999. <u>Feasibility Study (Soil Vapor Extraction Test)</u>, Former Exxon Service Station 7-0276, 1400 Farmers Lane, Santa Rosa, California.

Environmental Resolutions, Inc. (ERI). May 21, 2004. <u>High-Vacuum Dual-Phase Extraction Pilot Test</u>, Former Exxon Service Station 7-0276, 1400 Farmers Lane, Santa Rosa, California.

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 1 of 15)

Well ID #	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MTBE	В	T	<u>— Е</u> -	X
(TOC)	Date	<	feet		_		(8015-8021B)	(8026B)			_	^
MW1	06/22/88	NLPH		198.29		42,000		ug/L-				>
(201.39)	09/02/88			196,65					1,800	total BTEX		
	01/26/89		2.02	199,37		280	_					
	02/18/90		1.87	199.52					13	total BTEX	<del></del>	<del></del>
	03/13/90		1.91	199.48	_	_	_	B	_			
	03/27/89		1.67	199.72				_			-	
	04/25/89	NLPH	2.13	199.26		120			9	lotal BTEX		
	07/26/89 10/24/89	NLPH	2.97	198.42		86			11	total BTEX		
	12/18/89	NLPH	2.19	199.20		220	_		18	lotal BTEX		
	01/26/90	NLPH NLPH	2.69	198.70								
	04/19/90	NLPH	2.24 2.59	199.15		95			9	total BTEX		
	07/26/90	NLPH	<u> </u>	198.80		57			3	total BTEX		
	10/11/90	NLPH			-	67	_		5	<0.3	<0.3	<0.6
	04/23/91	NLPH	***			88 <50			10	<0.3	<0.3	0.8
	07/25/91	NLPH				88			2.0	<0.5	<0.5	<0.5
	10/03/91	NLPH	_		***	<50	<u></u>		5.1	0.6	<0.5	0.5
	01/20/92	NLPH	-			<50	<del></del>		< 0.5	<0.5	<0.5	<0.5
	04/30/92	NLPH				<50			<0.5	<0.5	<0.5	<0.5
	11/02/92	NLPH				<50			3.9	1.8	8.0	<0.5
	12/07/92	NLPH				<50	_		3.2 2.8	1.4	<0.5	<0.5
	03/29/93	NLPH				<50	_		2.0	<0.5 1.5	<0.5	<0.5
	06/16/93	NLPH		_		<50		_	2.2	<0.5	1.8	6
	07/26/93	NLPH			_	61		_	8.4	1.1	<0.5 1.7	<0.5
	01/19/94 07/25/94	NLPH	_	<b></b>	_	350		_	29	0.82	6.1	2.4 2.1
	01/26/95	NLPH	_		<del></del>	100	•	-	4.2	1.5	3.7	9.1
	07/26/95	NLPH NLPH	<del>-</del> .		<56	<50		_	<0.5	<0.5	<0,5	<0,5
	01/18/96	NLPH			61	<50	27,000d		1.5	<0.5	<0.5	<0.5
	01/16/97	NLPH	2.90	— 198.49		<50			<0.5	<0.5	<0.5	<0.5
	04/21/97	NLPH	3.15	198.49	_	<50 -50	<30		<0.5	<0.5	< 0.5	<0.5
	07/09/97	NLPH	3.17	198.22		<50 <50	<30		<0.5	<0.5	<0.5	<0.5
	10/27/97	NLPH	2.51	198.88		-50	<30		<0.5	<0.5	<0.5	<0.5
	03/25/98	NLPH	1.26	200.13	_	 <50		_		-	-	
	06/11/98	NLPH	1.45	199.94		<50	100	69	<0.5	<0.5	0.86	1.2
(201.51)	09/10/98	NLPH	2.06	199.45		<50	95		<0.5	<0.5	<0.5	<0.5
	12/15/98	NLPH	1.99	199.52		<50	92		<0.5 <0.5	<0.5	< 0.5	<0.5
	03/09/99	NLPH	1.22	200.29		<50	110		<0.5	<0.5	<0.5	<0.5
	06/28/99	NLPH	1.89	199.62		<50	28		<0.5	<0.5 <0.5	<0.5	<0.5
	09/21/99	NLPH	2.07	199.44		<50	<2.5	_	<0.5	<0.5	<0.5 <0.5	<0.5
	12/27/99 03/27/00	NLPH	2.31	199.20		<50	54		<0.5	<0.5	<0.5	<0.5 <0.5
	06/13/00	NLPH NLPH	1.51	200.00	_	<50	62	_	<0.5	<0.5	<0.5	<0.5
•	06/16/00	Property le	2.10	199.18 Valero Refin		<50	160	140	<0.5	<0.5	<0.5	<0.5
(201.28)	09/21/00	NLPH	2.10	199.18	ing Compa				-			
	12/27/00	NLPH	2.29	198.99	_	<50 <50	180	180	<0.5	<0.5	<0.5	<0.5
	03/26/01	NLPH	1.76	199.52	_	<50 <50	370	380	2.8	1.7	<0.5	<0.5
	06/29/01	NLPH	1.91	199.37	_	<50	1,200	1,300	3.9	0.82	0.75	2.17
	09/24/01	NLPH	2.33	198.95		54	2,100 2,300	1,200	<0.5	<0.5	<0.5	<0.5
	11/1/2001	Well surve	eyed in comp	pliance with A	AB 2886 red	uirements	_,000	2,400	3.7	<2.5	<2.5	<2.5
(004.55)	12/26/01	NLPH	1.26	200.02	60i	<50	1,900	2,000	<0.5	~0 E	-0.5	
(201.28)	03/26/02	NLPH	1.55	199.73	<50.0	749	912	1,300	<0.50	<0.5 <0.50	<0.5	<0.5
	06/24/02	NLPH	1.79	199.49	<52 k	268	335	268	<0.5	<0.5	<0.50 <0.5	<0.50
	09/23/02	NLPH	1.88	199.40	98	151	188	197	<0.5	<0.5	<0.5	<0.5
	12/31/02 03/28/03	NLPH	1.21	200.07	<50	108	138	134	<0.5	<0.5	<0.5	<0.5
	06/05/03	NLPH NLPH	1.50	199.78	<50	59.0	64.5	45,9	<0.50	<0.5	<0.5	<0.5 <0.5
	09/09/03	NLPH	1.58	199.70	<50	<50.0	26.5	31.0	<0.50	<0.5	0.7	<0.5
	12/01/03	NLPH	1.79 1.88	199.49	<50 -50	<50.0	20.5	24.2	<0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	1.61	199.40 199.67	<50	<50.0	10.6	9.30	0.50	<0.5	2.6	0.8
	06/16/04	NLPH	1.96	199,87	<50 54	<50.0	_	10.9	<0.50	0.6	<0.5	<0.5
	09/15/04r	NLPH	2.14	199.14	<50	<50.0	5.5	5.3	<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	2.12	199.16	62	<50.0	_	3.00	<0.50	<0.5	<0.5	<0.5
						<50.0		2.90	<0.50	0.5	<0.5	<0.5
MW2	06/22/88	NLPH	4.6	196.91		ND			AID.	N/B		
(201.51)	09/02/88	NLPH	4.74	196.77	_				ND	ND	ND	ND
	01/26/89	NLPH	4.43	197.08		ND			ND —	ND	ND.	
	03/27/89	NLPH	3.02	198.49	_	_				ND 	ND	ND

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Well ID#	Sampling	SUBJ	DŤW	Elev.	TOUL	7011-						
110111011	Qampinig.	3000	DIV	Ciev.	TPHd	TPHg	MTBE (8015-8021B)	MTBE	В	T	E	X
(TOC)	Date	<	—feet—	>	<		(0015-00216)	(8026B) ug/L				
MW2 (cont.)	04/25/89	NLPH	3.54	197.97	<del></del>	ND		ug/L	ND	ND	ND	<del>&gt;</del>
(201.51)	07/26/89	NLPH	4.48	197,03		ND			ND	ND	ND	ND ND
	10/24/89	NLPH	3.85	197,66		ND	_		ND	ND	ND	ND
	12/18/89	NLPH	4.32	197.19								
	01/26/90	NLPH	3.88	197.63		ND			ND	ND	ND	ND
	02/18/90 03/13/90	NLPH	3.40	198.11							_	
	04/19/90	NLPH NLPH	3.51 4.14	198.00		AUD.			_	***	_	
	07/26/90	NLPH	<b>4</b> .14	197.13		ND <1	_		ND	ND	ND	ND
	10/11/90	NLPH	_	_		<1			<0.3	<0.3	<0.3	<0,6
	04/23/91	NLPH	_			<50			<0.3	<0.3	<0.3	<0.6
	07/25/91	NLPH			_	<50		-	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5
	10/03/91	NLPH	-		_	<50		_	<0.5	<0.5	<0.5 <0.5	<0.5 <0.5
	01/20/92	NLPH			_	<50			<0.5	<0.5	<0.5	<0.5
	04/30/92	NLPH				<50			<0.5	<0.5	<0.5	<0.5
	11/02/92	NLPH	_			<50	_		<0.5	<0.5	<0.5	<0.5
	12/07/92	NLPH	_	_		<50			<0.5	<0.5	<0.5	<0.5
	03/29/93 07/26/93	NLPH		_		<50			1.6	<0.5	0.9	2.8
	01/19/94	NLPH NLPH	_	_		<50	_		<0.5	<0.5	<0.5	<0.5
	07/25/94	NLPH	_	_	***	<50	_		<0.5	<0.5	<0.5	<0.5
	01/26/95	NLPH	_	_	330	<50 78	_		<0.5	<0.5	<0.5	<0.5
	07/26/95	NLPH		_	56	<50	 <10.000		< 0.5	<0.5	<0.5	0.53
	01/18/96	NLPH	-	_	_	<50	<10,000		<0.5	<0.5	<0.5	<0.5
	01/16/97	NLPH	3.25	198.26		<50	<30		<0.5	<0.5	<0.5	<0.5
	04/21/97	NLPH	3.48	198.03	_	<50	<30	-	<0.5 <0.5	<0.5	<0.5	<0.5
	07/09/97	NLPH	4.07	197.44		<50	<30	_	<0.5	<0.5 <0.5	<0.5	<0.5
	10/27/97	NLPH	4.12	197.39		_		_		~u.5	<0.5 —	<0.5
	03/25/98	NLPH	2.47	199.04	_	<50		4.4	<0.5	<0.5	<u></u> <0,5	 <0.5
	06/11/98	NLPH	2.81	198.70	_	<50	<2.5		<0.5	<0.5	<0.5	1.1
	09/10/98	NLPH	3.52	197.90	87	<50	<2.5		<0.5	<0.5	<0.5	<0.5
(201.42)	12/15/98	NLPH	3.09	198.33	_				_			-0.5
	03/09/99	NLPH	2.48	198.94					_	_		_
	6/28/99a	NLPH	3.35	198.07	_				_			
	09/21/99	NLPH	3.54	197.88	<50	<50	3.22	_	<0.5	<0.5	<0.5	1.44
	12/27/99 03/27/00	NLPH	3,91	197.51	_	_						
	06/13/00	NLPH NLPH	2.91 3.31	198.51 198.11		_						
-	06/16/00		ansferred	lo Valero Refir	<50	<50	<2		<0.5	0.68	<0.5	<0.5
	09/21/00	NLPH	3,67	197.75	82	411y -<50	12		. 05			
	12/27/00	NLPH	3.79	197.63	60e	<50	12 <2	_	<.05	0.55	<.05	0.64
	03/26/01	NLPH	3.24	198.18	<50	<50	<2	_	<0.5 <0.5	<0.5	<0.5	<0.5
	06/29/01	NLPH	3.58	197.84	52	<50	7.4	10	<0.5 <0.5	<0,5 <0,5	<0.5	<0.5
	09/24/01	NLPH	3.97	197.45	<50	<50	1.900	2,100	<0.5	<0.5	<0.5 <0.5	<0.5
	11/1/2001	Well surve	yed in com	npliance with ,	AB 2886 re	quirements	3.	2,100	-0.0	٧٥.5	~0.5	<0.5
	12/26/01	NLPH	2.42	199.00	<del>5</del> 6i	· <50	430	420	<0.5	<0.5	<0.5	<0.5
(201.37)	03/26/02	NLPH	3.31	198.06	<50.0	<50.0	3.60	4,5	<0.50	<0.50	<0.50	<0.50
	06/24/02	NLPH	3.40	197.97	71 k	<50	54.8	40.8	<0.5	<0.5	<0.5	<0.5
	09/23/02	NLPH	3.54	197.83	54	<50.0	23.0	26.1	<0.5	<0.5	<0.5	0.7
	12/31/02	NLPH	2.11	199.26	<50	<50.0	13.0	12.9	<0.5	<0.5	<0.5	<0,5
	03/28/03	NLPH	3.03	198.34	<50	<50.0	5.1	3.10	<0.50	<0.5	<0.5	0,8
	06/05/03 09/09/03	NLPH	3.07	198.30	<50 •50	<50.0	4,6	8.20	<0.50	<0.5	<0.5	<0.5
	12/01/03	NLPH NLPH	3.38	197,99	<50 50	<50.0	3,0	3.30	<0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	3.52 3.08	197.85	<50	<50.0	5.1	4.80	<0.50	<0,5	<0.5	<0.5
	06/16/04	NLPH	3.60	198.29 197.77	<50	<50.0		3.50	<0.50	1.3	<0.5	<0.5
	09/15/04r	NLPH	3.75	197.62	<50 <50	<50.0	2.3	2:5	<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	3.37	197.91	<50 < <b>50</b>	<50.0	_	2.30	<0.50	<0.5	<0.5	<0.5
	,		0.0,	15,151	<b>~50</b>	<50.0		3.40	<0.50	<0.5	<0.5	<0.5
MW3	06/22/88	NLPH	0.70	198.54	_	42,000	_		1 000	4-4-1 57-1		
(199.24)	09/02/88	NLPH	2.37	196.87		42,000	<u>-</u>		1,800	total BTEX		
•	01/26/89	NLPH	0,74	198.50		35,000		-	10,000	total PTEY		
	03/27/89	NLPH	0.00	199.24		_		_		total BTEX		
	04/25/89	NLPH	6.60	192.64		39,000	 		14,000	Iolal PTEV		
	07/26/89	NLPH	0.68	198.56	_	21,000	<del>_</del>		6,400	lolal BTEX lolal BTEX	_	
	10/24/89	NLPH		_		33,000			11,000	total BTEX	_	
	12/18/89	NLPH	0.27	198,97								-
	01/26/90	NLPH	0.05	199.19		29,000		_	13,000	total BTEX		_
	02/18/90	NLPH	0.00	199.24		_		<del></del>	_			_
	03/13/90	NLPH	0.00	199.24		_			_		_	_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 3 of 15)

387-10 IIS 44		- ALIB /										
Well ID#	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MTBE	В	Ť	E	X
(TOC)	Date	<	fact	_			(8015-8021B)	(8026B)				
MW3 (cont.)	04/19/90	NLPH	leet	400.00		2 222		ug/L		<del></del>		>
(199.24)	07/26/90	NLPH	0.28	198.96	-	8,820		_	25,000	lolal BTEX		
(155.24)	10/11/90	NLPH	0,30	198.94	_	20,000	bried		760	1,100	370	1,600
	04/23/91	NLPH	0.48	198.76		32,000			2,400	3,200	810	3,800
	07/25/91	NLPH	0.16	199.08		58,000	_		2,500	5,300	1,100	7,500
	10/03/91		0.93	198.31		37,000		_	1,500	2,400	960	4,900
		NLPH	0.88	198.36		22,000		_	920	1,800	770	3,300
	01/20/92	NLPH	1.20	198.04		27,000			770	2,900	570	3,400
	04/30/92	NLPH	0.14	199.1		61,000	_		2,400	3,000	2,300	5,700
	11/02/92	NLPH	0.75	198.49	-	20,000			1,000	610	560	2,200
	12/07/92	NLPH	0.72	198.52		34,000			1,700	1,400	850	4,700
	03/29/93	Sheen	0.00	199.24	-			h				1,100
	07/26/93	NLPH	0.02	199,22	_	43,000			2,100	3,300	1,100	4,900
	08/24/93	Sheen	0.10	199.14	-					_		
	09/22/93	NLPH	0.15	199.09	_							
	10/06/93	Sheen	0,35	198.89	_							
	11/08/93	Sheen	0.30	198.94								***
	12/07/93	Sheen	0.01	199.23	_							
	01/19/94	NLPH	0.21	199.03	_	85,000			2,100	4,000		
	07/25/94	NLPH	0.26	198.98	_	26,000			1,300	1,800	1,500	6,200
	01/26/95	Sheen	0.10	199.14	<500	34,000	_		1,000		700	3,200
	07/26/95	LPH	0.43	198,81					1,000	1,000	840	3,200
	01/18/96	NLPH	3.50	195.74		23,000	_		260			
	01/16/97	NLPH	3.58	195.66		6,900	<600		360	370	280	1,800
	04/21/97	NLPH	3,37	195.87		13,000	480	 470	77	120	56	1,900
	07/09/97	NLPH	3,48	195.76	_	9,100	<300	170	82	220	320	3,400
	10/27/97	NLPH	1.15	198.09	_	20,000			53	120	270	1,400
	03/25/98	NLPH	g		_		520		780	280	290	1,500
	06/11/98	NLPH	0.02	g 199.22	_	3,200		210	39	33	170	180
	09/10/98	NLPH	0.25	198.99		15,000	640		810	340	710	2,100
	12/15/98	NLPH			2,700	13,000	500		570	220	670	1,200
	03/09/99		0.39	198.85	1,300	13,000	510		760	420	880	2,100
		NLPH	80.0	199.16	2,000	12,000	1,100	_	560	610	850	2,700
	06/28/99	NLPH	0.32	198.92	4,890	12,500	674		494	172	944	904
	09/21/99	Sheen	0.34	198.90	1,680ь	9,630	668		384	136	761	554
	12/27/99	NLPH	0.85	198.39	920	11,000	1,100		510	320	1,100	914
	03/27/00	NLPH	0.32	198.92	1,700	8,500	2,600		300	210	940	875
_	06/13/00	<u>NLPH</u>	0.25	198.99	1,200	7,700	2,000	1,300	370	160	940	350
	06/16/00	Property		o Valero Refir		any .						
	09/26/00	NLPH	0.35	198,89	1,000	4,900	2,200	1,800	290	90	670	180
	12/27/00	NLPH	0.77	198.47	680e	7,600	9,200	8,700	300	180	650	335
	03/26/01	NLPH	0.35	198,89	1,100	6,500	14,000	15,000	190	190	510	475
	06/29/01	NLPH	0.33	198,91	830	9,200	11,000	7,500	250	150	930	188.6
	09/24/01	NLPH	0.81	198.43	1000i	5.300	10.000	11,000	190	57	370	
	11/1/2001	Well surv	eyed in com	pliance with	АВ 2886 ге	quirements		,000	100	31	370	57
	12/26/01	NLPH	0.25	-0.25	850i	6,400	2,400	2,600	150	120	530	202
(199.21)	03/26/02	NLPH	0.55	198,66	1,090	7,870	1,500	2,134	230	230		302
	06/24/02	NLPH	0.40	198,81	1,360 k	5,890	788	772	191	74.0	708	678
	09/23/02	NLPH	0.43	198.78	870	5810	574	260	192		450	125
	12/31/02	NLPH	0.25	198.96	1,160	5,040	408	380		60.0	400	50,0
	03/28/03	NLPH	0.49	198.72	1,780	578	52.3	264	164 19.4	93.0 11.7	426	184
	06/05/03	NLPH	0.34	198.87	660	16901	357	492		11.7	46.6	27.2
	09/09/03	NLPH	0.30	198.91	1,090	1,320	389	374	164 115	60.0	174	86.2
	12/01/03	NLPH	0.60	198.61	1,210	5,030	324			40.8	333	54.4
	03/23/04	NLPH	0.60	198.61	356	4,850		260.1	114	51.5	296	78,8
	06/16/04	NLPH	0.47	198,74	1,080	9,620	72.7	84.4	82.9	45.7	148	48.3
	09/15/04г	NLPH	0.46	198,75	<50	9,260		256	290	101	1,010	141
	12/15/04	NLPH	0.52	198.69			_	57.2	154	62.8	513	66,8
	.210,04		0.52	130.03	1,110	4,380	***	43.2	86.0	55.6	225	114
MW4	06/22/88	NLPH	2.06	400.75								
(203.71)	09/02/88		3,96 5.70	199.75		ND			ND	ND	ND	ND
(200.11)	01/26/89	NLPH	5.79	197.92		_		_			_	_
		NLPH	3.60	200.11	_	ND			ND	ND	ND	ND
	03/27/89	NLPH	2.46	201.25	_		_		-	_		_
	04/25/89	NLPH	2.68	201.03	-	ND	_	_	ND	ND	ND	ND
	07/26/89	NLPH	3.94	199.77		ND		_	ND	ND	ND	ND
	10/24/89	NLPH	2.64	201.07		ND			ND	ND	ND	ND
	12/18/89	NLPH	3,05	200.66	_	_				_		
	01/26/90	NLPH	2.67	201.04	_	ND	_		ND	ND		MD.
	02/18/90	NLPH	2.43	201.28	_			<del>-</del>	_		ND	ND
	03/13/90	NLPH	2.54	201.17		_			_	<del></del>	_	
	04/19/90	NLPH	3.34	200.37		ND	_	_	ND	ND	AID	—
									HU	ND	ND	ND

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Well ID#	Sampline	CUDI	554									
AACII ID #	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MTBE	B	Ť	E	X
(TOC)	Date	<	feet				(8015-8021B)	(8026B)				• • • • • • • • • • • • • • • • • • • •
MW4 (cont.)	07/26/90		166(		<u> </u>	<1		<del>u</del> g/L				>
(203.71)	10/11/90	_		_		<1			<0.3	<0.3	<0.3	<0.6
	04/23/91	_		_		<50		_	<0.3	<0.3	<0.3	<0.6
	07/25/91	_				<50		_	<0.5	<0.5	<0.5	<0.5
	10/03/91	_			_	<50			<0.5	<0.5	<0.5	<0.5
	01/20/92				_	260			<0.5	<0.5	<0.5	<0.5
	04/30/92		_			<50	<del>_</del>	<del></del>	8.3	25	7.1	32
	11/02/92	-	_	_		<50	_		<0.5 <0.5	<0.5	<0.5	<0.5
	12/07/92	_			_	<50		<u>-</u>	<0.5	<0.5	<0.5	<0.5
	03/29/93	_			_	<50			<0.5	<0.5	< 0.5	<0.5
	07/26/93	_	_			<50		<b></b>	<0.5	0.6 <0.5	< 0.5	<0.5
	01/19/94				_	<50	_		<0.5	<0.5	<0.5 <0.5	<0.5
	07/25/94		_			<50	_		<0.5	<0.5	<0.5	<0.5 <0,5
	01/26/95	-	_		<50	<50			<0.5	<0.5	<0.5	<0.5 <0.5
	07/26/95		_		50	<50	<10,000		<0.5	<0.5	<0.5	<0.5 <0.5
	01/18/96	AU DU	_			<50	_		<0.5	<0.5	<0.5	<0.5
	01/16/97 04/21/97	NLPH	2.50	201.21		<50	<30		<0.5	<0.5	<0.5	<0.5
	07/09/97	NLPH	3.26	200.45		<50	<30		<0.5	<0.5	<0.5	<0.5
	10/27/97	NLPH NLPH	3.67	200.04	-	<50	<30		<0.5	<0.5	<0.5	<0.5
	03/25/98	NLPH	3.31 2.33	200.40	_		_		_		~~~	
	06/11/98	NLPH	2.52	201.38 201.19		<50		<2.0	<0.5	<0.5	<0.5	<0.5
(203.68)	09/10/98	NLPH	2.94	201.19	 74	<50	<2.5		<0.5	<0.5	<0.5	<0.5
(,	12/15/98	NLPH	2.71	200.74	74 50	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	03/09/99	NLPH	2.32	200.37	<50 <50	<50 -50	<2.5		<0.5	<0.5	<0.5	<0.5
	06/28/99	NLPH	2.71	200.97	<50	<50 <50	<2.5		<0.5	<0.5	<0.5	<0.5
	09/21/99	NLPH	2.74	200.94	<50	<50	<2.5	_	<0.5	<0.5	<0.5	<0.5
	12/27/99	NLPH	2.96	200.72	<100	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	03/27/00	NLPH	3.15	200.53	<50	<50	<2 <2		<0.5	<0.5	<0.5	<0.5
_	06/13/00	NLPH	2.81	200.87	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	06/16/00	Property to	anseerred	lo Valero Re	eining Com	pany			<0.5	<0.5	<0.5	<u> &lt;0.5</u>
	09/21/00	NLPH	2.99	200.69	<50	<50	<2		<0.5	0.50		_
	12/27/00	NLPH	3.08	200.60	<50e	<50	<2		<0.5	0.56	<0.5	<0.5
	03/26/01	NLPH	2.60	201.08	<50	<50	< <u>2</u>		<0.5	<0.5 <0.5	<0.5	<0.5
	06/29/01	NLPH	2.47	201.21	120	<250	33,000	21,000	17	<2.5	<0.5	<0.5
	09/24/01	NLPH	3.21	200.47	52i	<50	6.1	6	<0.5	<0.5	<2.5	14
15	11/1/2001	Well surve	eyed in com	pliance with	AB 2886 re	quirements		Ť	-0.0	74.5	<0.5	<0.5
(202.04)	12/26/01	NLPH	2.23	201.45	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
(203.64)	03/26/02	NLPH	2.41	201.23	<50.0	<50.0	<2.00	0.9	<0.50	<0.50	<0.50	<0.50
	06/24/02	NLPH	2.63	201.01	92 k	<50	0.8	<0.50	<0.5	<0.5	<0.5	<0.5
	09/23/02 12/31/02	NLPH	2.42	201.22	81	<50,0	<0.5		<0.5	<0.5	<0.5	<0.5
	03/28/03	NLPH NLPH	2.10	201.54	<50	<50.0	<0,5	_	<0.5	< 0.5	<0.5	<0.5
	06/05/03	NLPH	2.47	201.17	<50	<50.0	<0.5	_	<0.50	<0.5	<0.5	<0.5
	09/09/03	NLPH	2.53	201,11	<50	<50.0	<0.5	_	<0.50	<0.5	< 0.5	<0.5
	12/01/03	NLPH	2.62 2.52	201.02	<50	<50.0	<0.5	_	<0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	2.50	201.12 201.14	133	<50.0	<0.5	-	<0.50	<0.5	<0.5	<0.5
	06/16/04	NLPH	2.78	200.86	<50 <50	<50.0	_	<0.50	<0.50	0.5	<0.5	<0.5
	09/15/04г	NLPH	2.81	200.83	<50	<50.0 <50,0		<0.50	<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	2.66	200,98	<50	<50.0 <50.0		<0.50	<0.50	<0.5	<0.5	<0.5
			_,_,	200,00	750	<b>\50.0</b>	_	<0.50	<0.50	<0.5	<0.5	<0.5
MVV5	06/22/88	NLPH	1.06	199.56		20,000			7.000			
(200.62)	09/02/88	NLPH	2.96	197.66					7,900	lolal BTEX		
	01/26/89	NLPH	0.84	199.78		11,000		-		<del>-</del>		
	03/27/89	NLPH	0.29	200.33	_			_	3,000	total BTEX		_
	04/25/89	NLPH	0.17	200.45		6,000	_	-	1,400			_
	07/26/89	NLPH	1.20	199.42		9,300	_		4,100	Iolal BTEX		_
	10/24/89	NLPH	0.99	199.63		11,000			3,700	total BTEX		
	12/18/89	NLPH	0,46	200.16	_				-	total BTEX	_	
	01/26/90	NLPH	0.26	200,36		1,000			440	tolal BTEX		_
	02/18/90	NLPH	0.00	200.62	_					.5(a) 5   EX		
	03/13/90	NLPH	0.00	200.62			_		_	_		-
	04/19/90	NLPH	0.68	199.94	-	3,900	_		1,610	lotal BTEX	_	
	07/26/90	NLPH	0.95	199.67	-	5,200		_	<b>5</b> 5	240	250	800
	10/11/90	NLPH	0.59	200.03		3,300			44	140	230	420
	04/23/91 07/25/91	NLPH	0.70	199.92		16,000		_	160	860	190	1,900
	10/03/91	NLPH	1,60	199.02		20,000	_	_	150	780	850	2,400
	01/20/92	NLPH NLPH	1.52	199.10	_	4,400	-		42	46	160	390
	- 1120132	пынгП	1.58	199.04	-	3,200			45	150	220	500

# TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 7-0276 1400 Farmers Lane

Santa Rosa, California (Page 5 of 15)

Well ID#	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE (8015-8021B)	MTBE (8026B)	В	Т	Ē	х
(TOC)	Date		feet	>	<			ug/L				>
MW5 (cont.)	04/30/92	NLPH	0.37	200.25		16,000			270	1,100	1,700	3,900
(200.62)	11/02/92	NLPH	1.35	199.27	_	450			5.1	1.7	35	5.4
	12/07/92	NLPH	1.00	199.62	_	90			0.9	2	7.3	16
	03/29/93	NLPH	0.34	200.28		1,100			7.7	68	120	240
	07/26/93	NLPH	0.46	200.16		9,100			75	230		
	08/24/93	NLPH	0.55	200,07			<del>_</del>				870	1,100
	09/22/93	NLPH	0.62	200.00	_		_			_		-
	10/06/93	NLPH	0.74	199.88				<del></del>				-
	11/08/93	NLPH	0.78	199.84								
	12/07/93	NLPH	0.52	200.10	_	_		,	_	_		
										_		
	01/19/94	Sheen	0.63	199,99	_	8,300			63	290	470	910
	07/25/94	NLPH	0.88	199.74		1,900			22	16	170	67
	01/26/95	Sheen	0.52	200.10	120,000d	2,400	120,000d		15	53	180	180
	07/26/95	LPH	0.56	200,06	_							
	01/18/96	NLPH	0.00	200.62		1,500			24	5.1	12	7.4
	01/16/97	NLPH	0.47	200.15		3,200	380		58	39	190	160
	04/21/97	NLPH	0.81	199.81		1,700	95	31	2	5.7	36	32
	07/09/97	NLPH	0.70	199.92		870	61	_	<0.5	4.5	16	21
	10/27/97	NLPH	0.75	199.87			_		_			
	03/25/98	NLPH	0.43	200,19	_	<50	62		<0.5	<0.5	<0.5	<0.5
	06/11/98	NLPH	g	g	_	60	8.7	_	0.75	0.7	3.1	2.4
	09/10/98	NLPH	0.26	200,33	5,700	3,200	160	_	<10	<10	76	
(200,59)	12/15/98	NLPH	0.19	200,4	820	2,000	220	_	<5.0			22
,	03/09/99	NLPH	0.45	200.14	<50	<50	91			12	130	74
	06/28/99	NLPH	0.20	200.19	4,870	4,160	149		<0.5	<0.5	<0.5	<0.5
	09/21/99	Sheen	0.38	200.33	•			_	46	<10	131	34.2
	12/27/99				2,390b	4,200	68	_	<10	17.4	148	32
		NLPH	1.51	199.08	4,000	4,200	1,000	_	11	5.2	140	31.7
	03/27/00	NLPH	0.00	200.59	2,800	3,000	890	_	26	3.8	120	30
-	06/13/00	NLPH	0.21	200.38	410	1,500	580	540	<2.5	<2.5	94	18
	06/16/00			to Valero Ref								
	09/26/00	NLPH	0.30	200.29	560	1,800	2,500	2,200	<2.5	3.2	75	15
	12/27/00	NLPH	0.45	200.14	460e	2,600	9,700	8,700	<2.5	4.2	91	42.1
	03/26/01	NLPH	0.00	200.59	720	2,900	4,600	4,400	<2.5	4.2	100	57.6
	06/29/01	NLPH	0.09	200.5	460	2,800	5,600	3,700	< 0.5	5.8	53	18.6
	09/24/01	NLPH	0.43	200.16	780i	1,600	750	840	25	3.7	28	12
	11/1/2001	Well surv	eyed in con	opliance with	АВ 2886 ге	quirements	S.			,		
	12/26/01	NLPH	0.48	200.11	300i	1,400	1,500	1,300	26	. 14	38	39
(200.60)	03/26/02	NLPH	0.00	200.60	351	382	79.5	108	2.50	0.80	5.70	4.20
	06/24/02	NLPH	0.00	200.60	94 k	443	109	63.2	1.5	2.7	16.1	6,3
	09/23/02	NLPH	0.08	200.52	201	760	45.1	48.1	<0.5	2.6		
	12/31/02	NLPH	0.00	200.60	481	340	51.8	54.9	0.9		6.9	6.7
	03/28/03	NLPH	0.00	200.60	308	1,120	37.8			1.4	5.7	4.6
	06/05/03	Sheen	0.00	200.60	202	995	30.0	22.2	11.6	1.9	19.1	11.1
	09/09/03	NLPH	0.10	200.50	501			24.4	13.0	2.6	10.3	5.4
	12/01/04	NLPH	0.60			963	10.9	11.2	4.60	1.5	5.4	4.3
	12/02/03	MELLI	0.00	200.00		-	_					_
		NI DII			614	1,380	116	114	7.60	2.0	20.0	11.6
	03/23/04	NLPH	0.00	200,60	384p	1,150		6.50	8.10	0.9	2.0	1.9
	06/16/04	NLPH	0.40	200.20	591	582	9.3	5.3	2.30	2.1	1.2	6.3
	09/15/04r	NLPH	0.23	200.37	118	586	_	3.20	<0.50	1.8	8.2	3.1
	12/15/04	NLPH	0.12	200.48	676	698	_	6.70	6.20	1.9	20.5	11.3
MW6	06/22/88	NLPH	3.61	199,67	_	630	-		160	total BTEX	_	
(203.28)	09/08/88	Sheen	5.41	197.87	_							
	01/26/89	Sheen	3.24	200.04								
	03/27/89	LPH	1.44	201.84		_	_	_				
	04/25/89	LPH	2.25	201.03	_	_			_			
	07/26/89	NLPH	3.37	199.91		18		_	2	A-A-I DTEV		_
	10/24/89	NLPH	2.34	200.94		20				total BTEX		
	12/18/89	NLPH	2.73	200.55			_		ND	total BTEX		
	01/26/90	NLPH	2.73	201.07		 		_		<del>-</del>		
	02/18/90				-	330		_	84	total BTEX		
		NLPH	1.82	201.46						_	_	_
	03/13/90	NLPH	2.04	201.24	_		-	-				
	04/19/90	NLPH	2.85	200.43		330			74	total BTEX		
	07/26/90	NLPH	2.35	200,93				<del></del> -	_			_
	10/11/90	LPH	3.42	199.86	_		-	_				
	04/23/91	NLPH	2.52	200.76	-	440			6.1	4.7	<0.5	38
	07/25/91	LPH	3.44	199.84		_	_			<del></del>		
	10/03/91	LPH	3.79	199,49		290	-	<del></del>	5.3	5.9	5.1	27
	01/20/92	LPH	4.16	199,12	_			_		5.5		
							-					

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 6 of 15)

Well ID#	Sampling	SUBJ	DTM									
446II ID #	Sampling	SOBJ	DTW	Élev.	TPHd	TPHg	MTBE	MTBE	В	T	E	X
(TOC)	Date	<	feet		<		(8015-8021B)	(8026B)				
MW6 (cont.)	04/30/92	LPH	2.47	200,81				ug/L				>
(203.28)	11/02/92	LPH	3.35	199,93					_			
	12/07/92	LPH	4.50	198.78								
	03/29/93			_	_							
	06/16/93	LPH	2.49	200.79	_	830						
	06/29/93	LPH	2.87	200.41	_	_			25	9	19	1000
	07/26/93	Sheen	2.71	200.57		_						_
	08/24/93	Sheen	2.81	200.47			_	_	_			
	09/22/93	NLPH	2.85	200.43	_	_						
	10/06/93	NLPH	3.02	200.26	_							
	11/08/93	Sheen	3.11	200.17	<b></b>					***		
	12/07/93	Sheen	2.65	200.63	_			_				
	01/19/94	Sheen	2.62	200.66		420	_	_	7,5	1.8	7.9	31
	07/25/94	LPH	2.71	200.57								31
	01/26/95	LPH	1,63	201.65				_				
	07/26/95	LPH	2.44	200.84			_		_			
	01/18/96	NLPH	2,45	200.83		_						
	01/16/97	NLPH	2.01	201.27	_	_						
(203.48)	04/21/97 07/09/97	NLPH	11.0	192.28		<50	<30	_	<0.5	< 0.5	<0.5	<0.5
(200.40)	10/27/97	NLPH	3.15	200.13		<50	<30	_	<0.5	<0.5	<0.5	<0.5
	03/25/98	NLPH	2.95	200.33	_	<50	<30		<0.5	<0.5	<0.5	0.71
	06/11/98		_		-	_		_				
	09/10/98	NLPH	2,59	200.89	440			_				_
	12/15/98	NLPH	2.31	200.89	110	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	03/09/99	NLPH	1.62	201.17	82 120	<50	<2.5	_	<0.5	<0.5	<0.5	<0.5
	06/28/99	NLPH	2.32	201.16	238	<50	<2.5		<0.5	<0.5	< 0.5	<0.5
	09/21/99	NLPH	2.41	201.07	175b	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	12/27/99	NLPH	3.00	200,48	240	<50 <50	<2.5		<0.5	<0.5	<0.5	<0.5
	03/27/00	NLPH	1.92	201.56	120	<50	2.1		<0.5	<0.5	<0.5	<0.5
	06/13/00	NLPH	2.43	201.05	51	<50	<2 <2		<0.5	<0.5	<0.5	<0.5
•	06/16/00		ansferred t	o Valero Refir			<del></del>		<0.5	<0.5	<u>&lt;0.5</u>	<0.5_
	09/21/00	NLPH	2.65	200.83	76	·, <50	82	62	<0.5	40 G		_
	12/27/00	NLPH	2.77	200.71	59e	<50	2.2	- -	<0.5	<0.5	<0.5	<0.5
	03/26/01	NLPH	2.22	201.26	<50	<50	<2	_	<0.5	<0.5	<0.5	<0.5
	06/29/01	NLPH	2.41	201.07	69	<50	<2	_	<0.5	<0.5 <0.5	<0.5	<0.5
	09/24/01		-	_		_	_	_		~0.5	<0.5	<0.5
	12/26/01	NLPH	1.49	201.99	84i	<50	<2		<0.5	<0.5	 <0.5	
	3/26/02j								_	-0.0	~0.5 —	<0.5
	6/24/02j	NLPH	2.18	201.30	114 k	<50	<0.5		<0.5	<0.5	<0.5	 <0.5
	09/23/02	NLPH	2.31	201.17	56	<50	<0.5	_	<0.5	<0.5	<0.5	<0.5
	12/31/02	NLPH	1.47	202.01	<50	<50.0	<0.5		<0.5	<0.5	<0.5	<0.5
	03/28/03	NLPH	1.88	201.60	<50	<50.0	<0.5		< 0.50	<0.5	<0.5	<0.5
	06/05/03 09/09/03	NLPH	1.96	201.52	<50	<50.0	<0.5	_	< 0.50	<0.5	<0.5	<0.5
	12/01/04	NLPH	2.15	201.33	59	<50.0	0.5	0.60	< 0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH NLPH	2.13	201.35	< <del>5</del> 0.	<50.0	<0.5		<0.50	<0.5	<0.5	<0.5
	06/16/04	C	2.09	201.39	<50.	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
	09/15/04r	NLPH	с 2. <del>5</del> 1	c 200,97	C	C	C	C	C	C	C	C
	12/15/04	NLPH	1.81	200.97	<50 60	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
			1.01	201.07	66	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
MW7	08/12/88			_		ND						
(205.59)	09/02/88	NLPH	8.06	197.53		ND		-	ND	ND	ND	ND
. ,	01/26/89	NLPH	5.94	199.65		 7	_			_		
	03/27/89	NLPH	3.84	201.75	_		<del></del> -		ND	ND	ND	ND
	04/25/89	NLPH	4.60	200.99		ND			_			<del></del>
	07/26/89	NLPH	5.83	199.76		ND		_	ND	ND	ND	ND
	10/24/89	NLPH	4.77	200.82		ND	_	_	ND	ND	ND	ND
	12/18/89	NLPH	5.27	200.32					ND	ND	ND	ND
	01/26/90	NLPH	4.54	201.05		ND			ND.	NO.		_
	02/18/90	NLPH	4.09	201.50	_				ND	ND	ND	ND
	03/13/90	NLPH	4.41	201.18	_			_				_
	04/19/90	NLPH	5.26	200.33		ND	<del></del>	_	ND	L ND		
	07/26/90				_	<1			<0.3	ND	ND	ND 10.0
	10/11/90	-	_			<1	_	_	<0.3	<0.3	<0.3	<0.6
	04/23/91					<50	<del>-</del>	_	<0.5	<0.3 <0.5	<0.3	<0.6
	07/25/91	-		_		<50	<u></u>		<0.5 <0.5	<0.5 <0.5	<0.5	<0.5
	10/03/91	-	-		_	<50		_	<0.5	<0.5 <0.5	<0.5 <0.5	<0.5
	01/20/92	-	_	_		_	_			~0.5 —-		<0.5
											_	_

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-0276
1400 Farmers Lane
Santa Rosa, California
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Well ID #	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MTBE		т -	Ē	x
(TOC)	Date	<	feet	>	_		(8015-8021B)	(8026B)	_	•	-	^
MW7 (cont.)	04/30/92		-1001-			<50		ug/L_				>
(205.59)	11/02/92	_				<50			<0.5	< 0.5	<0.5	<0.5
,,	12/07/92		748			<50 <50			<0.5	<0.5	<0.5	<0,5
	03/29/93	***				<50			<0.5	<0.5	<0.5	1.4
	06/16/93			_		<50 <50	-		<0.5	<0.5	<0.5	<0.5
	07/26/93	_		_		<50	_		<0.5	<0.5	<0.5	<0.5
	01/19/94		_			<50	<del></del>		<0.5	<0.5	<0.5	<0.5
	07/25/94					_			<0.5	<0.5	<0.5	<0.5
	01/26/95	_				_			_			
	07/26/95					_						
	01/18/96	_	_			_		_			_	
	01/16/97	NLPH	3.96	201.63						***	_	_
	04/21/97	NLPH	4.13	201.46		_		_				
	07/09/97	NLPH	5.40	200.19				_				_
	10/27/97	NLPH	5.45	200.14	_	_					_	
	03/25/98	NLPH	3.61	201.98		<50		<2.0	<0.5	<0.5	<0.5	0.58
	06/11/98	NLPH	3.96	201.63		<50	<2.5		<0.5	<0.5	<0.5	<0.5
	09/10/98	NLPH	4.89	201.57	170	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	12/15/98	NLPH	4.59	201,87	<50	<50	<2.5		<0.5	<0,5	<0.5	<0.5
	03/09/99	NLPH	3.65	202,81	58	<50	<2.5		<0.5	<0.5	<0.5	0.74
(000 40)	06/28/99	NLPH	4.59	201,87	100	<50	<2.5	_	<0.5	<0.5	<0.5	<0.5
(206.46)	09/21/99	NLPH	4.6	201,86	<50	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	12/27/99	NLPH	5.25	201.21	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	03/27/00	NLPH	4.04	202,42	59	<50	<2		<0.5	<0.5	<0.5	<0.5
-	06/13/00 06/16/00	NLPH	4.77	201.69	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
		Ргорелу і		to Valero Refir				_				
	09/21/00 12/27/00	NLPH	5.06	201.40	<50	<50	<2		<0.5	0.68	<0.5	<0.5
	03/26/01	NLPH	5.09	201.37	<50e	<50	<2	_	<0.5	<0.5	<0.5	<0.5
	06/29/01	NLPH NLPH	4.43	202.03	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	09/24/01	NLPH	2.71 5.29	203.75	56	<50	7.3	1 <b>1</b> 2	<0.5	<0.5	<0.5	<0.5
	11/1/2001			201.17 opliance with	<50	<50	<2	***	<0,5	<0.5	<0.5	<0.5
	12/26/01	NLPH	3.33	203.13	450 <50							
(206.42)	03/26/02	NLPH	4.31	203.13	<50.0	<50	<2		<0.5	<0.5	<0.5	<0.5
(===, :=)	06/24/02	NLPH	4.39	202.11	60 k	<50.0	<2.00		< 0.50	<0.50	<0.50	<0.50
	09/23/02	NLPH	4.55	201,87	89	<50 <50.0	<0.5	_	<0.5	<0.5	<0.5	<0.5
	12/31/02	NLPH	2.72	203.70	<50	<50.0 <50.0	<0.5 0.5		< 0.5	<0.5	<0.5	<0.5
	03/28/03	NLPH	3.99	202.43	<50	<50.0	<0.5	<0.5	<0.5 <0.50	< 0.5	<0.5	<0.5
	06/05/03	NLPH	4.13	202.29	<50	<50.0	<0.5	<del></del>	<0.50	<0.5 <0.5	<0.5	<0.5
	09/09/03	NLPH	4.35	202,07	<50	<50.0	<0.5	_	<0.50	<0.5 <0.5	<0.5 <0.5	<0.5
	12/01/04	NLPH	4.30	202.12	140	<50,0	<0.5		<0.50	<0.5	<0.5	<0.5 <0.5
	03/23/04	NLPH	4.06	202.36	<50	<50.0		<0.50	<0.5	0,5	<0.5	<0.5
	06/16/04	NLPH	4.65	201.77	<50	<50.0	<0.50	_	<0.50	<0.5	<0.5	<0.5
	09/15/04r	NLPH	4.74	201.68	<50	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	4.36	202.06	<50	<50.0	_	<0.50	<0.50	<0.5	<0.5	<0.5
MW8	08/12/88											
(199.16)	09/02/88	NLPH	 6 07	400.00	_	ND	_		ND	ND	ND	ND
(105.10)	01/26/89		6.87	192.29			_	_	_	_		
	03/27/89	NLPH NLPH	2,16	197.00		52			ND	ND	ND	ND
	04/25/89	NLPH	0.46	198.70	_						_	
	07/26/89	NLPH	0.41	198.75	_	190	_		10	total BTEX		
	10/24/89	NLPH	1.54 0.99	197.62		71	_		4	total BTEX		
	01/26/90	NLPH	1.01	198.17		120	-		1	total BTEX		
	04/19/90	NLPH	1.29	198.15 197.87		110			ND	total BTEX		
	07/26/90					95		_	2	lolal BTEX		
	10/11/90	_	_			620		_	19	<0.3	<0.3	<0.6
	04/23/91		_			1,600			76	0.9	1.0	2
	07/25/91	_	_	<del></del>		96 00			0.8	0.6	<0.5	<0.5
	10/03/91	_	_			98 <50		_	<0.5	<0.5	<0.5	<0.5
	01/20/92	_			_	<50 <50			0.6	<0.5	<0.5	<0.5
	04/30/92	_				<50	_		<0.5	<0.5	<0.5	<0.5
	11/02/92		_	_		190	_	_	<0.5	<0.5	<0.5	<0.5
	12/07/92	_	_	_		<50	<del></del>	_	3.7	<0.5	0.8	1.6
	03/29/93					<50			1.9	<0.5	<0.5	1.4
	06/16/93		_	<u></u>			_		1.6	<0.5	1.3	1.8
	07/26/93	_	_	<del></del> -		 <50						
	01/19/94	_			_	<50	<del>-</del>		0.79	<0.5	<0.5	<0.5
	07/25/94				_	<50	_		<0.5	<0.5	<0.5	<0.5
	01/26/95			_	<50	<50	_		1.5	1.0	<0.5	0.70
						-50	_ <del>_</del>	_	<0.5	<0.5	<0.5	<0.5

# TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 7-0276

er Exxon Service Station 7-027 1400 Farmers Lane Santa Rosa, California (Page 8 of 15)

Well ID #	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE (8015-8021B)	MTBE (8026B)	В	Ť	E	х
(TOC)	Date	<	<b></b> feet	·>	<		(0010-00210)	ug/L				>
MW8 (cont.)	07/26/95				450	<50	14000d		<0.5	<0.5	<0.5	<0,5
(199.14)	01/18/96		_	_		<50			<.5	<.5	<,5	<.5
	01/16/97	NLPH	1.07	198,09	-	<50	<30		<0.5	<0.5	<0.5	<0.5
	04/21/97	NLPH	1.10	198.06	_	<50	<30	_	<0.5	<0.5	<0.5	<0.5
	07/09/97	NLPH	1.81	197.35		<50	<30		<0.5	<0.5	<0.5	<0.5
	10/27/97	NLPH	1.55	197.61								_
	03/25/98	NLPH	0.14	199.02		<50		<2.0	<0.5	<0.5	<0.5	<0.5
	06/11/98 09/10/98	NLPH NLPH	0.30	198,86	_	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	12/15/98	NLPH	0.93 0.75	198.21	54 -50	<50 -50	14		<0.5	<0.5	<0.5	<0.5
	03/09/99	NLPH	0.73	198.39 198.92	<50 61	<50 <50	15		<0.5	<0.5	<0.5	<0.5
	06/28/99	NLPH	0.75	198.32	959	<50 <50	19 13.4		< 0.5	<0.5	<0.5	<0.5
	09/21/99	NLPH	0.97	198.17	172b	<50	22.3		<0.5	<0.5	<0.5	<0.5
	12/27/99	NLPH	1.10	198.04	<50	<50	53		<0.5 <0.5	<0.5	<0.5	<0.5
	03/27/00	NLPH	0.39	198.75	<250	<50	41		<0.5	<0.5 <0.5	<0.5	<0.5
	06/13/00	NLPH	0.68	198.46	<50	<50	61	53	<0.5	<0.5 <0.5	<0.5 <0.5	<0.5
•	06/16/00	Propdity t	ransidnidd	lo Valdro Rdf		anv			10.5	70.5	~0.5	<0.5
	09/21/00	NLPH	0.94	198.20	<50	<50	150	120	<0.5	<0.5	<0.5	<0.5
	12/27/00	NLPH	1.11	198.03	74e	<50	240	200	<0.5	<0.5	<0.5	<0.5
	03/26/01	NLPH	0.65	198.49	<50	<50	210	220	<0.5	<0.5	<0.5	<0.5
	06/29/01	NLPH	0.88	198.26	55	<50	450	260	<0.5	<0.5	<0.5	<0.5
	09/24/01	NLPH	1.39	197.75	<50	<50	900	1,200	<2.5	<2.5	<2.5	<2.5
	11/1/2001			npliance with		equirements	š,					2.0
	12/26/01	NLPH	1.42	197.72	<50	<50	790	730	<0.5	<0.5	<0.5	<0.5
(199.14)	03/26/02	NLPH	0.61	198.53	<50.0	378	447	562	<0.50	<0.50	< 0.50	<0.50
	06/24/02	NLPH	0.72	198.42	<51 k	323	404	327	<0.5	<0.5	<0.5	<0.5
	09/23/02	NLPH	0.91	198.23	57	349	476	529	<0.5	<0.5	<0.5	<0.5
	12/31/02	NLPH	2.32	196.82	<50	395	427	550	<0.5	<0.5	<0.5	<0.5
	03/28/03	NLPH	0.53	198.61	<50	285	323	256	<0.50	<0.5	<0.5	<0.5
	06/05/03 09/09/03	NLPH	0.46	198.68	<50n	191	187	333	<0.50	<0.5	<0.5	<0.5
	12/01/04	NLPH NLPH	0.76 0.60	198.38	<50	186	220	254	<0.50	<0.5	<0.5	<0.5
	12/02/03	INLF(1)		198.54		155			_	<del></del> -		_
	03/23/04	NLPH	0.70	 198.44	Π <50p		222	231	<0.50	<0.5	<0.5	<0.5
	06/16/04	NLPH	0.90	198.24	<50p 51	53.1 <50.0	 <0.5	128	<0.50	0.5	<0.5	<0,5
	09/15/04r	NLPH	1.10	198.04	<50	132		— 128	<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	0,84	198.30	<50	75.4	-	116	<0.50 <0.50	<0.5	<0.5	<0.5
			-,		-00	10.4		110	<b>~0.50</b>	<0.5	<0.5	<0.5
MW9	08/12/88	_			_	5.0	_	_				
(203.19)	09/02/88	NLPH	3.24	199.75		_	_					
	01/26/89	NLPH	5.16	198.03		ND	_	-	ND	ND	ND	ND
	03/27/89	NLPH	3.31	199.88		_	_					
	04/25/89	NLPH	4.11	199.08		ND	_		ND	ND	ND	ND
	07/26/89	NLPH	5.13	198.06		ND	_		ND	ND	ND	ND
	10/24/89	NLPH	4.51	198.68	-	ND	_		ND	ND	ND	ND
	12/18/89	NLPH	4.95	198.24								
	01/26/90	NLPH	4.45	198.74	-	ND	_		ND	ND	ND	ND
	02/18/90 03/13/90	NLPH	4.01	199.18					_	_	_	_
	04/19/90	NLPH NLPH	4.18 4.87	199.01 198.32		AUD.					_	_
	07/26/90					ND <1		_	ND	ND	ND	ND
	10/11/90	_		-	_	<1	_	_	<0.3	<0.3	<0.3	<0.6
	04/23/91		_	<del></del>		<50	_		<0.3	<0.3	<0.3	<0.6
	07/25/91			_	_	<50			<0.5	<0.5	<0.5	<0.5
	10/03/91					<50	_		<0,5 <0.5	<0.5	<0.5	<0.5
	01/20/92	_			_	<50	_ <u>_</u>	<del>-</del>	<0.5 <0.5	<0.5	<0.5	<0.5
	04/30/92					<50	_		<0.5	<0.5 <0.5	<0.5 <0.5	<0.5
	11/02/92	_	_			<50	_		<0.5	<0.5	<0.5	<0.5 <0.5
	12/07/92	_	_			<50	_		<0.5	<0.5	<0.5	<0.5
	03/29/93	_	-			<50	_		0.7	<0.5	<0.5	<0.5 <0.5
	06/16/93		_	_		<50	-		<0.5	0.6	<0.5	<0.5
	07/26/93					<50			0.7	1.9	1.1	5.5
	01/16/94			_	-	<50		_	<0.5	0.85	<0.5	2.0
	07/25/94				-	<50	<del></del>	_	<0.5	<0.5	<0.5	<0.5
	01/26/95		_		<50	<50			<0.5	<0.5	<0.5	<0.5
	07/26/95		_	_	<50	<50	<10000	_	<0.5	<0.5	<0.5	<0.5
	01/18/96					65		-	5.3	2.4	3.1	13
	01/16/97	NLPH	3.44	199.75		<50	<30	_	<0.5	<0.5	<0.5	<0.5
	04/21/97	NLPH	4.10	199,09	_	<50	<30		<0.5	<0.5	<0.5	<0.5

TABLE 1A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-0276
1400 Farmers Lane
Santa Rosa, California
(Page 9 of 15)

Well ID#	Sampling	SUBJ	DTW	Elev.	TPHd	TOU-	NATION -			. <u>.</u> .		
	Company	CODO	DIW	Liev.	IPMO	TPHg	MTBE (8015-8021B)	MTBE	В	Т	E	X
(TOC)	Date	<	feet	>	<		(6015-80216)	(8026B)				
MW9 (cont.)	07/09/97	NLPH	4.50	198,69		<50	<30	ug/L				>
(203.19)	10/27/97	NLPH	4.45	198,74					<0.5	<0.5	<0.5	<0.5
	03/25/98	NLPH	3,06	200.13		 <50	_					
	06/11/98	NLPH	3.38	199.81				<2.0	<0.5	<0.5	<0.5	<0.5
	09/10/98	NLPH	4.14	199.01	 50	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	12/15/98	NLPH	· 3.80	199.34	53	<50	<2.5		<0.5	<0.5	<0.5	<0.5
	03/09/99	NLPH	3.06			_	B4					
	6/28/99a	NLPH		200.08	B-4							
(203.14)	09/21/99	NLPH	3.62	199.52								
	12/27/99	NLPH	4.10	199.04	<50	<50	<2.5	***	<0,5	<0.5	<0.5	<0.5
	03/27/00		4.51	198.63								
		NLPH	3.47	199.67								
	06/13/00	NLPH	3.91	199.23	<50	< <u>50</u>	<2		< 0.5	<0.5	< 0.5	<0.5
	06/16/00	Property t	ransterred	to Valero Refi								
	09/21/00	NLPH	4.28	198.86	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	12/27/00	NLPH	4.42	198,72	<50e	<50	<2		<0.5	<0.5	<0.5	<0.5
	03/26/01	NLPH	3.85	199.29	<50	<50	<2	***	<0.5	<0.5	<0.5	<0.5
	06/29/01	NLPH	4.20	198.94	57	<50	<2		<0.5	<0.5	<0.5	<0.5
	09/24/01	NLPH	4.58	198.56	<50	74	<2		<0.5	<0.5	<0.5	<0.5
	11/1/2001	Well surv	eyed in con	npliance with	AB 2886 re	equirements	S.		0.0	-0.0	٠٥.٥	~0.5
	12/26/01	NLPH	3.38	199.76	<50	<50	<2		<0.5	<0.5	<0.5	-0.E
(203.13)	03/26/02	NLPH	3.60	199.53	<50.0	<50.0	<2.00		<0.50	<0.50		<0.5
	06/24/02	NLPH	3.93	199.20	<51 k	<50	<0.5	_	<0.5	<0.50 <0.5	<0.50	<0.50
	09/23/02	NLPH	3.98	199.15	<50	<50.0	<0.5		<0.5		<0.5	<0.5
	12/31/02	NLPH	3.14	199.99	<50	<50.0	<0.5	_	<0.5	<0.5	<0.5	<0.5
	03/28/03	NLPH	3,53	199.60	<50	<50.0	<0.5			<0.5	<0.5	<0.5
	06/05/03	NLPH	3.62	199.51	<50	<50.0	<0.5	_	<0.50	<0.5	<0.5	<0.5
	09/09/03	NLPH	3,88	199.25	<50	<50.0	<0.5	_	< 0.50	<0.5	<0.5	<0.5
	12/02/03	NLPH	4.17	198.96	<50	<50.0		_	<0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	3,61	199.52	<50		<0.5		<0.50	<0.5	<0.5	<0.5
	06/16/04	NLPH	4.15	198.98	<50	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
	09/15/04r	NLPH	4.99	198.14		<50.0	<0.50		<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	3.50	199,63	<50	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
	,,,	MEITI	3.50	133,03	<50	<50.0	_	<0.50	<0,50	<0.5	<0.5	<0.5
MW10	08/12/88											
(198.42)	09/02/88	NLPH	4.02	400.5	_	53,000	_					
(190.42)	01/26/89	NLPH	4.92	193.5	_		_	_		_		
	03/27/89		2.28	196.14		25,000	_	_	8,700	total BTEX	-	_
		NLPH	1.51	196.91	_				_	-		_
	04/25/89	NLPH	1.93	196.49	_	28,000	_	_	12,000	total BTEX		
	07/26/89	NLPH	3.54	194.88	_	24,000			11,000	total BTEX		_
	10/24/89	NLPH	1.92	196,50	_	27,000	_		9,800	total BTEX		_
	12/18/89	NLPH	2.71	195.71			_					_
	01/26/90	NLPH	2.23	196.19		22,000			10,000	total BTEX		_
	02/18/90	NLPH	1.01	197.41		_						
	03/13/90	NLPH	1.76	196.66	_					_		
	04/19/90	NLPH	2,59	195.83	_	31,000	_	_	14,490	total BTEX		_
	07/26/90	NLPH	2.39	196.03		26,000			4,700	1,400	820	
	10/11/90	NLPH	2.93	195.49		30,000			5,200			2,400
	04/23/91	NLPH	1.80	196.62		60,000				1,400	1,000	3,100
	07/25/91	NLPH	2.88	195.54	_	44,000			9,200 5,700	5,400	1,100	4,500
	10/03/91	NLPH	3.58	194.84		46,000	<del></del>		5,700	2,500	1,500	4,400
	01/20/92	NLPH	2.70	195.72		29,000		_	4,300	2,300	1,400	4,100
	04/30/92	NLPH	2.10	196.32		77,000			4,000	1,500	930	2,700
	11/02/92	NLPH	2.60	195.82		29,000			29,000	31,000	3,000	9,600
	12/10/92	NLPH	2.75	195.67					3,000	1,500	1,100	3,000
	03/29/93	NLPH	1.44		_	73,000			13,000	4,900	2,900	8,300
	07/26/93	NLPH	2.58	196,98 195,84		38,000	_		8,800	2,800	1,600	4,200
	08/24/93				_	47,000	_		5,400	2,000	1,900	4,600
		NLPH	2.75	195.67			_			·	_	_
	09/22/93	NLPH	2.82	195.60	_		_	_		-		_
	10/06/93	NLPH	2.99	195.43		-	-	_	_		_	
	11/08/93	NLPH	2.68	195.74	_	_				_	_	
	12/07/93	NLPH	2.02	196.40			_	_		_		_
	01/19/94	Sheen	2.10	196.32		45,000		_	4,900	1,700	1,200	3,600
	07/25/94	NLPH	3.00	195.42		31,000	-		3,100	1,800	1,400	
	01/26/95	NLPH	1.50	196,92	<500	23,000			2,500	370		4,100
	07/26/95	LPH	2.46	195.96	_		_	_			900	1,300
	01/18/96	NLPH	1.00	197.42	_	18,000	<600		2 000	1 100	4 400	
	DAMEROZ	_	1.38	197.04		-			2,900	1,100	1,100	2,400
	01/16/97	_										
	04/21/97	NLPH							4.400	4.500	4.505	
			2.27 3.12	196.15 195.30		25,000 25,000	<600 <600	 	4,400 2,300	1,500 980	1,500 1,400	2,400 3,300

# TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 7-0276

er Exxon Service Station 7-02' 1400 Farmers Lane Santa Rosa, California (Page 10 of 15)

Well ID#	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MTBE	В	т-	E	- x
(TOC)	Data	<	<b>6</b>		_	·	(8015-8021B)	(8026B)		•	_	^
MW 10 (cont.)	Date 10/27/97	NLPH	2.60	405.00	<u></u>	- 10.000		ug/L				>
(198.42)	03/25/98			195.82	_	18,000	<200		1,300	450	880	1,800
(130.42)	06/11/98	_	_	_	-			_		-		-
	09/10/98	NLPH	<u> </u>	405.00		_			-			_
	12/15/98	NLPH	1.43	195.80	2,700	23,000	830	_	1,800	450	1,200	1,900
	03/09/99	NLPH	0.93	196.99 197.49	1,800	15,000	760		1,800	500	780	1,500
	06/28/99	NLPH	2.00		1,900	15,000	620	-	2,900	1,300	1,100	1,800
	09/21/99	NLPH	2.62	196.42	3,100	19,400	<250	_	1,960	1,640	1,220	2,880
	12/27/99	NLPH	2.02	195.80	1,180b	9,260	545		1,100	360	710	1,110
	03/27/00	NLPH	1.43	196.10	870	16,000	<10		1,800	640	870	1,690
	06/13/00	NLPH		196.99	660	15,000	<50		2,300	1,100	930	1,750
-	06/16/00		2.21	196.21	1,400 Refining Com	26,000	<200		2,700	1,200	<u>1,40</u> 0	2,680
	09/21/00	NLPH	2.47									
	12/27/00	NLPH	2.18	195.95 196.24	110	12,000	280	<10	1,300	450	940	1,440
	03/26/01	NLPH	1.65		770e	18,000	<100	_	2,300	960	910	1,960
	06/29/01	NLPH		196.77	1,400	24,000	<200	-	2,800	1,800	1,200	2,860
	09/24/01	NLPH	2.27 2.75	196.15	1,200	17,000	<50	<5	1,300	530	1,000	1,560
	11/1/01			195.67	1,200 F516	14,000	<b>42</b> i	<5	830	290	800	1,210
	12/26/01	NLPH	1.40	197,02	ith AB 2886			_				
(198.43)	03/26/02	NLPH	1.42		1,200i	17,000	<100	<5	1,700	760	940	1,620
(100.40)	06/24/02	NLPH		197.01	1,330	17,800	270	<10	2,360	1,110	1,200	1,850
	09/23/02	NLPH	2.41 2.53	196.02	1,940 k	14,800	40.0	<0.50	970	748	410	1,180
	12/31/02	NLPH	2,33 0.98	195.90	1,290	9,560	50.0	<5.00	500	189	530	789
	03/28/03	NLPH	1.64	197.45	1,090	8,860	<0.5	<0.5	1,010	425	550	955
	06/05/03	C	-	196,79	2,320	22,100	98,0	<5.00	1,950	958	1,010	1,790
	09/09/03	c	_	_	_		_		_	-	_	
	12/02/03	c			-		_		-		-	
	03/23/04	c	_		***	_	_	-	-		_	_
	06/16/04	NLPH	2.56	195.87	4 000				_			-
(202.34)	09/15/04r	NLPH	6.87	195.47	1,080	11,400	54.0	5.8	918	292	866	1,100
	12/15/04	NLPH	5.92	198.42	1,140 <b>982</b>	9,380		15.7	546	111	640	474
	-12 10/04	.4 (1	0.02	180,42	692	9,120		8.1	705	286	521	709
MW 11	06/27/88	NLPH	_			70						
(201.49)	09/02/88	NLPH	4.97	198.52	_	79		-		-		-
(== 1.1.5)	01/26/89	NLPH	1.81	199.68		AID		-	_	_	_	_
	03/27/89	NLPH	0.69	200.80		ND		_	ND	ND	ND	ND
	04/25/89	NLPH	1.79	199.70	_	ND				_		_
	07/26/89	NLPH	3.65	197.84	_	ND	_	_	ND	ND	ND	ND
	10/24/89	NLPH	2.01	199.48	_		_	_	ND	ND	ND	ND
	12/18/89	NLPH	2.89	198.60	_	ND	-	-	ND	ND	ND	ND
	01/26/90	NLPH	1.97	199.52		ND	_	-		_		-
	02/18/90	NLPH	2.89	198.60				-	ND	ND	ND	ND
	03/13/90	NLPH	1.96	199,53		_		_	_	_	-	
	04/19/90	NLPH	2.39	199.10	_	ND		_				_
	07/26/90		_		_	<1		-	ND	ND	ND	ND
	10/11/90					<1	_	_	<0.3	<0.3	<0.3	<0.6
	04/23/91		_	_		<50	_		<0.3	<0.3	<0.3	<0.6
	07/25/91	_			_		_	-	<0.5	0.7	<0.5	<0.5
	10/03/91	_	_	•	_	<50	_	_	-0.5	٠	_	
	01/20/92	-			_	610		_	<0.5	<0.5	<0.5	<0.5
	04/30/92	-		-	_	<50	_	<del>-</del>	44 -0.5	43	33	93
	11/02/92		_			<50			<0.5	<0.5	<0.5	<0.5
	12/10/92		_		_	<50		_	<0.5	<0.5	<0.5	<0.5
	03/29/93	_			_	<50			<0.5	<0.5	<0.5	<0.5
	06/16/93		_					_	0,6	<0.5	0.6	<0.5
	07/26/93			_			_		_			
	01/19/94		_	_		<50		_	— <0.5			
	07/25/94	_	-	_		_		_	~0.0	<0.5	<0.5	<0.5
	01/26/95		_					_	_	-	_	
	07/26/95	_		_	•••	_		_	_		_	-
	01/18/96			_		_		_			_	
	01/16/97	NLPH	0.87	200,62				_			_	
	04/21/97	NLPH	0.94	200.55		***	_		-	_	_	_
	07/09/97	NLPH	1.95	199,54				_				
	10/27/97	NLPH	2.87	198.62			_	_	_			-
	03/25/98			_		_	_		_		_	
	06/11/98	NLPH	1.20	200.29		<50	<2.5		<0.5		-0.5	-0.5
	09/10/98	NLPH	2.84	198.7	<50	<50	<2.5			<0.5	<0.5	<0.5
(201.54)	12/15/98	NLPH	1.11	200,43	_	_			<0.5	<0.5	<0.5	<0.5
										_		

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 11 of 15)

Well ID#	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MYDE				
			-		.,,,,	11.119		MTBE	В	Т	E	X
(TOC)	Date	<	feet	_			(8015-80218)	(8026B)				
MW11 (cont.)				>				ug/L				>
		NLPH	0.31	201.23		_						<del></del>
(201.54)	6/28/99a	NLPH	2.66	198.88								
	09/21/99	NLPH	3.18	198.36	<50	<50	<2.5		<0.5	-0.5		
	12/27/99	NLPH	2.50	199.04				_		<0.5	<0.5	<0.5
	03/27/00	NLPH	1,52	200.02				_				
	06/13/00	NLPH	2,57	198.97				_			_	
	06/16/00			190.97	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
		Floperty	mansierred	lo Valero Refi								
	09/21/00	NLPH	3.10	198.44	<50	<50	<2		<0.5	<0.5	<0.5	*0 C
	12/27/00	NLPH	1.96	<b>19</b> 9.58	< <b>50</b> e	<50	· <2		<0.5			<0.5
	03/26/01	NLPH	1.38	200.16	<50	<50	<2			<0.5	<0.5	<0.5
	06/29/01	NLPH	2.51	199.03	<50	<50			<0.5	<0.5	<0.5	<0.5
	09/24/01	NLPH	3.35	198.19			<2		<0.5	<0.5	<0.5	<0.5
				190, 19	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	11/1/2001	vven surv	eyed in cor	npliance with		quirements	5.					2,0
/a	12/26/01	NLPH	0.45	201.09	<50	<50	<2		<0.5	<0.5	40 F	
(201.52)	03/26/02	NLPH	0.84	200.68	<50.0	<50.0	<2.00				<0.5	<0.5
	06/24/02	NLPH	2.78	198.74	54 k	<50	<0.5		<0.50	<0.50	<0.50	<0.50
	09/23/02	NLPH	3,71	197.81					<0.5	<0.5	< 0.5	<0.5
	12/31/02	NLPH			91	<50	<0.5	_	<0.5	<0.5	<0.5	0.7
			0.00	201.52	<50	<50.0	<0.5		<0.5	<0.5	<0.5	<0.5
	03/28/03	NLPH	1.11	200.41	<50	<50.0	<0.5		<0.50	<0.5		
	06/05/03	NLPH	3.18	198.34	<50	<50.0	<0.5				<0.5	<0.5
	09/09/03	NLPH	3.01	198.51	<50	<50.0			<0.50	<0.5	<0.5	<0.5
	12/01/03	NLPH	3.11	198.41			<0.5	_	<0.50	<0.5	<0.5	<0.5
	03/23/04				<50	<50.0	<0.5	_	0.5	<0.5	0.9	2.0
		q	q	q	q	q	q	q	q	q		
	06/16/04	q	q	q	q	q	q	q			q	P
	09/15/04r	q	q	q	q	ġ	ģ		q	q	q	q
	12/15/04	q	q	ģ	ģ			q	q	q	q	q
		•	-	7	4	q	q	q	q	q	q	q
MW12	06/27/88											•
						ND			ND	ND	ND	ND
(198.50)	09/02/88	NLPH	2.79	195.71		***					IND	ND
	01/26/89	NLPH	0.84	197.66	_	ND						_
	03/27/89	NLPH	0,60	197.90					ND	ND	ND	ND
	04/25/89	NLPH	0.80	197.70				_				_
	07/26/89	NLPH				ND			ND	ND	ND	ND
			1.37	197.13	_	ND		_	ND	ND	ND	ND
	10/24/89	NLPH	0.71	197.79	_	ND		_	ND	ND		
	12/18/89	NLPH	1.07	197.43	_		_	_			ND	ND
	01/26/90	NLPH	0,87	197,63	_	ND			_			
	02/18/90	NLPH	0.58	197.92	_		<del></del>	_	ND	ND	ND	ND
	03/13/90	NLPH	0.77									_
				197.73	_	_						_
	04/19/90	NLPH	1.05	197.45	_	ND		_	ND	ND	ND	
	07/26/90			_		ND		_	ND			ND
	10/11/90					<1.0				ND	ND	ИD
	04/23/91		***	_	_	<1.0	_	_	<0.3	<0.3	<0.3	<0.6
	07/25/91						-		<0.3	<0.3	<0.3	<0.6
	10/03/91					<50			<0.5	<0.5	<0.5	<0.5
						<50			<0.5	<0,5	<0.5	<0.5
	01/20/92		_	_		<50			<0.5	<0.5		
	04/30/92	_			_	<50					<0.5	<0.5
	11/02/92	_				<50	<del></del>		<0.5	<0.5	<0.5	<0.5
	12/10/92				_		_		<0.5	<0.5	<0.5	<0.5
	03/29/93					<50	-	_	<0.5	<0.5	<0.5	<0.5
						<50		_	<0.5	<0.5	<0.5	<0.5
	06/16/93		_	_		<50			0.8	<0.5		
	07/26/93		_	_							<0.5	<0,5
	01/19/94		_	_		<50						
	07/25/94		_	_			_	_	<0.5	<0.5	<0.5	<0.5
	01/26/95			_	_	<50		_	<0.5	<0.5	<0.5	<0.5
			_			<50		_	<0.5	<0.5	<0.5	<0.5
	07/26/95		_	_	<50	200		_	6.6	9.1		
	01/18/96			_	63	<50	<10,000				10	29
	01/16/97	NLPH	0.65	197.85	_	<50		_	<0.5	<0.5	<0.5	<0.5
	04/21/97	NLPH	0.62	197.88			<30		<0.5	<0.5	<0.5	<0.5
	07/09/97	NLPH			_	<50	<30		<0.5	<0,5	<0.5	<0.5
			1.64	196.86		<50	<30		<0.5	<0.5	<0.5	<0.5
	10/27/97	NLPH	1. <del>6</del> 5	196.85				_				
	03/25/98	_				_	_	_			-	
	06/11/98	NLPH	0.77	197.73								
	09/10/98	NLPH	1.55			<50	<2.5		<0.5	<0.5	<0.5	<0.5
	12/15/98			196.96	<50	<50	<2.5		<0.5	<0.5	<0.5	<0.5
		NLPH	0.89	197.62				_				
	03/09/99	NLPH	80.0	198.43	_			<del></del> -				
	06/28/99	C			_		_			_		
(198.51)	09/21/99	C		_	_			_	_	_		
	12/27/99	C		_	_	_	_		_		_	_
	03/27/00				_	_	_		_	_	_	_
	00/2//00	С		_		-	_		_		_	_
											_	_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 12 of 15)

161 1175 11												
Well ID#	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MTBE	В	Ť	E	X
(700)							(8015-8021B)	(8026B)			_	,
(TOC)	Date	<	feet	<del>&gt;</del>	<_		<del></del>	ug/L				>
MW12 (cont.)	06/13/00	NLPH	1.00	197.51	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
(198.5 <b>1</b> )	06/16/00	Property	transferred	to Valero Ref								
	09/21/00 12/27/00	NLPH	1.53	196.98	110	<50	<2		<0.5	<0.5	<0.5	<0.5
		NLPH	0.90	197.61	63e	<50	<2		<0.5	<0.5	< 0.5	<0.5
	03/26/01	NLPH	0.81	197.70	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	06/29/01	NLPH	1.01	197.50	55	<50	<2		<0.5	<0.5	<0.5	<0.5
	09/24/01	NLPH	1.52	196.99	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	11/1/2001	vveii sur	veyed in cor	npliance with			S.					
(198.47)	12/26/01	NLPH	0.59	197.92	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
(190.47)	03/26/02	NLPH	0.68	197.79	<50.0	<50.0	<2.00		<0.50	<0.50	< 0.50	<0.50
	06/24/02	NLPH	1.51	196.96	86 k	<50	<0.5		<0.5	<0.5	<0.5	<0.5
	09/23/02	NLPH	1.70	196.77	69	<50	<0.5	_	<0.5	<0.5	< 0.5	<0.5
	12/31/02	NLPH	0.00	198.47	53	<50.0	<0.5		<0.5	<0.5	<0.5	<0.5
	03/28/03	NLPH	1.78	196.69	<50	<50.0	<0.5		<0.50	<0.5	<0.5	<0.5
	06/05/03	NLPH	0.98	197.49	<50	<50.0	<0.5		< 0.50	<0.5	< 0.5	<0.5
	09/09/03	NLPH	1.13	197.34	<50	<50.0	<0.5		< 0.50	<0.5	<0.5	<0.5
	12/01/03	NLPH	3.54	194.93	<50	<50.0	<0.5	_	< 0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	1.89	196.58	<50	<50.0	_	<0.50	<0.50	<0.5	<0.5	<0.5
	06/16/04	NLPH	2.27	196.20	<50	<50.0	<0.5		1.20	<0.5	0.6	1.4
	09/15/04r	NLPH	2.21	196.26	<50	<50.0		<0.50	< 0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	1.91	196,56	62	<50.0	_	<0.50	<0,50	<0.5	<0.5	<0.5
MAKES	0.4/40/00											40.5
MW13	04/19/90	NLPH	2.38	195.74	_	ND			ND	ND	ND	ND
(198.12)	07/26/90	NLPH				<1			<.3	<.3	<.3	<.6
	10/11/90	NLPH	_		_	<1			<,3	<.3	<.3	<.6
	04/23/91	NLPH				<50			<.5	<.5	<.5	<.5
	07/25/91	NLPH	_			<50			<.5	<.5	<.5	<.5
	10/03/91	NLPH			_	<50		_	<.5	<.5	<.5	<.5
	01/20/92	NLPH	-		_	<50	_	_	<.5	<.5	<.5	<.5
	04/30/92	NLPH		_		<50			<.5	<,5	<.5	<,5
	11/02/92	_						_			_	
	12/10/92					_		_	_			
	03/29/93	NLPH			_	<50			0.8	<.5	<.5	<.5
	06/16/93						_					
	07/26/93	_	_		_		-					_
	01/19/94		_		_					_		_
	07/25/94	_	_	-	_	-	_				_	_
	01/26/95		_	_								
	07/26/95		_				_					
	01/18/96				_		_	_		_		
	01/16/97	NLPH	0.61	197.51			_	_	_			_
	04/21/97	NLPH	0.68	197.44		_		_	_			
	07/09/97	NLPH	1. <del>5</del> 8	196.54	-	_			_			
	10/27/97	NLPH	1.29	196.83	_	<50	<30		<0.5	<0.5	<0.5	<0.5
	03/25/98				_	_	_	_	_	_		
	06/11/98	NLPH	0.1	198.02		<50	<2.5	_	<0.5	<0.5	<0.5	<0.5
	09/10/98	NLPH	1.13	196.99	<50	<50	<2.5		<0,5	<0.5	<0.5	<0.5
	12/15/98	NLPH	0.5	197,62		_			_		_	
	03/09/99	NLPH	g	g		_			_			_
	6/28/99a	NLPH	0.73	197.39		_						_
	09/21/99	NLPH	0.9	197.22	<50	<50	<2.5	-	<0.5	<0.5	<0.5	<0.5
	12/27/99	NLPH	1	197.12			_	_		_		_
	03/27/00	NLPH	0.21	197.91	_		_			_		-
_	06/13/00	NLPH	0.7	197.42	<50	<50	<2	_	<0.5	<0.5	<0.5	<0.5
	06/16/00	Property to	ransterred t	o Valero Refir								
	09/21/00	NLPH	1.11	197.01	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	12/27/00	NLPH	0.91	197.21	60e	<50	<2		<0.5	<0.5	<0.5	<0.5
	03/26/01	NLPH	0.31	197.81	<50	<50	<2		<0.5	< 0.5	<0.5	<0.5
	06/29/01	NLPH	0.84	197.28	59	<50	<2		<0.5	< 0.5	<0.5	<0.5
	09/24/01	NLPH	1.22	196.90	<50	<50	<2	<del></del>	<0.5	<0.5	<0.5	<0.5
	11/1/2001	vveli surve	eyed in com	pliance with								7.0
(400.40)	12/26/01	NLPH	0.38	197.74	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
(198.12)	03/26/02	NLPH	0.11	198.01	<50.0	<50.0	<2.00	_	<0.50	<0.50	<0.50	<0.50
	06/24/02	NLPH	0.77	197.35	<52 k	<50	<0.5	_	<0.5	<0.5	<0.5	<0.50
	09/23/02	NLPH	1.04	197.08	87	<50	<0.5	_	<0.5	<0.5	<0.5	<0.5
	12/31/02	NLPH	0.00	198.12	53	<50.0	<0.5		<0.5	<0.5	<0.5	<0.5 <0.5
	03/28/03	NLPH	0.25	197.87	<50	<50.0	<0,5		<0.50	<0.5	<0.5	<0.5
	06/05/03	NLPH	0.40	197.72	<50	<50.0	<0.5		<0.50	<0.5	<0.5	<0.5 <0.5
	09/09/03	NLPH	1.20	196.92	<50	<50.0	<0.5	<del></del>	<0.50	<0.5	<0.5	<0.5
											٠,٠	-0.0

# TABLE 1A CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 13 of 15)

Well ID #	Sampling	SUBJ	DTW	Elev.	Third	<del></del>		<del></del>				
		, 0000	DIV	Elev.	TPHd	TPHg	MTBE (8015-8021B)	MTBE (8026B)	В	T	E	X
(TOC)	Date	<u> </u>	feet	<del></del> >	· <_			ug/L-				
MW13 (cont.)			3.61	194.51	<50.	<50.0	<0.5	ug/L-	<0.50	-O.F		<del>&gt;</del>
(198.12)	03/23/04		0.91	197.21	72	<50.0		<0.50		<0.5	<0.5	< 0.5
	06/16/04	NLPH	1.00	197.12	<50	<50.0	<0.50		<0.50	<0.5	<0.5	<0.5
	09/15/04	r s	s	s	<50s	<50.0s			<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	6.99	191.13	<50	<50,0	< <b>0.</b> 50	<0.50s	<0.50s	<0.5s	<0.5s	<0.5s
					100	130,0	<b>\0.</b> 50	_	<0.50	<0.5	<0.5	<0.5
MW14	04/19/90	NLPH	6.98	191.39		ND						
(198.37)	07/26/90	NLPH					***		ND	ND	ND	ND
•	10/11/90	NLPH		_	_	ND	_	_	ND	ND	ND	ND
	04/23/91	NLPH			_	<1.0			<0.3	<0.3	<0.3	<0,6
	07/25/91	NLPH		_	_	<1.0	_		< 0.3	<0.3	<0.3	<0.6
	10/03/91			_	_	<50	_	_	<0.5	< 0.5	<0.5	<0.5
	01/20/92	NLPH		_	_	<50		_	<0.5	<0.5	<0.5	<0.5
		NLPH		_	_	<50			1.3	0.9	<0.5	<0.5
	04/30/92	NLPH		_	_	<50	_		<0.5	<0.5	<0.5	
	11/02/92	NLPH			_	<50			<0.5	<0.5		<0.5
	12/10/92	NLPH			_	<50			<0.5		<0.5	<0.5
	03/29/93	NLPH		_		<50	_			< 0.5	<0.5	<0.5
	06/16/93				_	_	_		0.6	<0.5	0.8	1.4
	07/26/93	NLPH				<50	_		_		_	
	01/19/94	NLPH	_			<50			<0.5	<0.5	<0.5	<0.5
	07/25/94	NLPH							<0.5	<0.5	<0.5	<0.5
	01/26/95	NLPH	_		<50	<50		_	<0.5	<0.5	<0.5	<0.5
	07/26/95	NLPH				<50			<0.5	<0.5	<0.5	<0.5
	01/18/96	NLPH	_	_	<50	<50	<10,000		<0.5	<0.5	< 0.5	<0.5
	01/16/97	NLPH				<50	-	_	1.6	1	1.6	7.5
	04/21/97		1.38	196.99		<50	<30	_	<0.5	<0.5	<0.5	<0.5
		NLPH	1.98	196.39	_	<50	<30		<0.5	<0.5	<0.5	<0.5
	07/09/97	NLPH	2.69	195.68		<50	<30	_	0.88	1	<0.5	
	10/27/97	NLPH	3.12	195.25								1
	03/25/98				-	_						
	06/11/98	NLPH	1.63	196.74	_	<50	<2.5		<0.5	<0.5		
	09/10/98	NLPH	2.47	195,9	<50	<50	<2.5		<0.5		<0.5	<0.5
	12/15/98	NLPH	1.81	196.56			_			<0.5	<0.5	0.78
	03/09/99	NLPH	1.26	197.11		_	_					
	6/28/99a	NLPH	2.62	195.75		_			_		_	_
	09/21/99	NLPH	2.64	195.73	<50	<50	<2.5				_	
	12/27/99	NLPH	2.62	195.75					<0.5	<0.5	<0.5	<0.5
	03/27/00	NLPH	2.01	196.36								
	06/13/00	NLPH	2.22	196.15	<50	-E0		_				
-	06/16/00		aneferred (	to Valero Refi	~30	<50	<2		<u>&lt;0.</u> 5	<0.5	<0.5	<0.5
	09/21/00	NLPH	2.41	195.96			_					
	12/27/00	NLPH	3.14	195.23		<50 -50	<2	<b></b>	<0.5	<0.5	<0.5	<0.5
	03/26/01	NLPH	2.65		61 F6911	<50	<2		<0.5	<0.5	<0.5	<0.5
	06/29/01	NLPH		195.72	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	09/24/01		2.63	195.74	68	<50	<2		<0.5	<0.5	<0.5	<0.5
		NLPH	4.30	194,07	<50	<50	<2		<0.5	<0.5	<0.5	<0.5
	11/1/2001	vveii surve	eyed in com	pliance with		quirements.					-0.0	70.0
(400 00)	12/26/01	NLPH	2.81	195.56	<50	<50	<2		<0.5	<0.5	<0.5	-O E
(198.38)	03/26/02	NLPH	2.32	196.06	<50.0	<50.0	<2.00		<0.50	<0.50		<0.5
	06/24/02	NLPH	3.11	195.27	<52 k	<50	<0.5				<0.50	<0.50
	09/23/02	NLPH	3.07	195.31	51	<50	<0.5		<0.5 <0.5	<0.5	<0.5	<0.5
	12/31/02	NLPH	1.59	196.79	<50	<50.0	<0.5			<0.5	<0.5	<0.5
	03/28/03	NLPH	1.99	196.39	<50	<50.0	<0.5 <0.5		<0.5	<0.5	<0.5	<0.5
	06/05/03	NLPH	2.21	196.17	<50	<50.0	<0.5		< 0.50	<0.5	<0.5	<0.5
	09/09/03	NLPH	3.34	195.04	<50	<50.0		_	<0.50	<0.5	<0.5	<0.5
	12/01/03	NLPH	3.10	195.28	<50		<0.5		<0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	1.93	196.45		<50.0.	<0.5	<del></del>	<0.50	<0.5	<0.5	<0.5
	06/16/04	NLPH	2.21		<50	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
	09/15/04г	NLPH	3.27	196.17	<50 -50	<50.0	<0.5	_	<0.50	<0.5	<0.5	<0.5
	12/15/04			195.11	<50	<50.0	_	<0.50	0.60	<0.5	1.2	1,1
		NLPH	8.60	1 <b>89.7</b> 8	<50	<50.0	_	<0.50	<0.50	<0.5	0.6	1.6
MW15	DE/43/00	All Ott	4 0.4		_							,,,,
_	06/13/00	NLPH	1.61	195.91	<u> &lt;50</u>	<50_	<u>45/37f</u>	37	1.5	2.4	0.51	4
(197.52)	06/16/00	Property tra		Valero Refit		пу						1
	09/21/00	NLPH	2.4	195.12	<50	63	100	86	5.6	3.7	20	40.0
	12/27/00	NLPH	2.99	194.53	93e	<50	120	94	0.64	3.7	3.8	12.9
	03/26/01	NLPH	2.17	195.35	<50	<50	330	370		<0.5	<0.5	<0.5
	06/29/01	NLPH	1.69	195.83	<50	<50	460		3.6	<0.5	1.9	0.64
	09/24/01	NLPH	2,77	194.75	<50	<50		320	<0.5	<0.5	<0.5	<0.5
			ved in com	pliance with	ΔB 280c	wiromant-	850	1,000	<0.5	<0.5	<0.5	<0.5
	12/26/01	NLPH	2.51	195.01	<50 <50		0.45-					
	03/26/02	NLPH	1.11	196.41		<50	2,400	2,700	4.9	0.78	4.4	4.9
	06/24/02	NLPH	1.11		<50.0	1,020	2,340	3,960	24.3	3.70	17.4	14.3
		• • • · · · · · · · · · · · · · · · · ·	1.01	196.01	97 k	1,300	2,240	2,100	<0.5	<0.5	<0.5	<0.5

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 14 of 15)

Well ID#	Sampling	SUBJ	DTW	Elev.	TPHd	TPHg	MTBE	MTBE	В	<del></del>	E	X
(TOC)	Date	<	feet	>	<		(8015-8021B)	(8026B)				
MW15 (cont.)	09/23/02	NLPH	1.15	196.37	62	1,460	1,760	2,260	4.5			<del>&gt;</del>
(197.52)	12/31/02	NLPH	0.60	196.92	351	747	787		1.5	1.1	4.8	5.3
, ,	03/28/03	NLPH	1,55	195.97	<50	415		936	4.4	2.7	4.5	7.0
	06/05/03	NLPH	0.89	196.63	<50m	219	397	332	5.30	3.1	4.6	6.3
	09/09/03	NLPH	1,81	195.71	<50		117	334	<0.50	<0.5	<0.5	<0.5
	12/01/03	NLPH	0.60	196.92	<50.	114	126	131	<0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	2.10	195.92		67.6	38.1	36.7	1.40	1.2	3.2	6.7
	06/16/04	NLPH	1.14	195.42	<50	<50.0		67.8	<0.50	<0.5	<0.5	<0.5
	09/15/04r				<50	66.3	<del>5</del> 4.0	58.7	<0.50	0.7	0.7	1.8
		NLPH	2.76	194.76	<50	<50.0		33.2	<0.50	<0.5	<0.5	< 0.5
	12/15/04	NLPH	1.37	196.15	52	<50.0	_	13.6	1.20	<0.5	9,0	0.8
RW1	1/16/97 RW	/1 not samp	oled 1/16/9	7 to date. No	previous ar	nalytical dat	la available.					
(198.86)	11/1/2001	Well surv	eyed in cor	npliance with	AB 2886 re	equirement	s.					
	3/26/2002	_	_			_			_	***		
	06/24/02								<b></b>		_	
	09/23/02				_						_	
	12/31/02						_					
	03/28/03		_		_		_					
	06/05/03				_		_			_		
	09/09/03	~			_		_					_
	12/02/03						_					
	03/23/04										_	
	06/16/04					_					_	
	09/15/04			_		_			_		-	
	12/15/04	_		_		_	<del></del>	_		~~=	_	
								_	_	_	-	_
MW16												
(201.29)	10/20/03	Well surve	eyed in con	npliance with	AB 2886 re	quirements	š.					
	12/01/03	NLPH	1.89	199.4	_	· —	_		_			
	12/02/03				<50	<50.0	<0.5		<0.50	<0.5	<u></u> <0.5	
	03/23/04	NLPH	7.34	193.95	<50	<50.0	_	<0.50	<0.50	<0.5		<0.5
	06/16/04	NLPH	1.88	199.41	64	<50.0	<0.5	10.00	1.20		<0.5	<0.5
	09/15/04г	NLPH	2.12	199.17	<50	<50.0		<0.50		<0.5	0.5	1.7
	12/15/04	NLPH	2.30	198,99	88	<50.0	-	<0.50	<0.50 < <b>0.50</b>	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
MW17								-,	10.00	10.0	~0.5	<b>~0.5</b>
(200.34)	10/20/03	Mall		P 101		_						
(200.54)		VVEII SUIVE	eyea in con	pliance with	AB 2886 re	quirements	S.					
	12/01/03	NLPH	2.51	197.83					_	_		_
	12/02/03			<del>-</del>	<50	<50.0	1.7	1.80	<0.50	<0.5	<0.5	<0.5
	03/23/04	NLPH	0.00	200.34	<50	<50.0	_	2.30	<0.50	<0.5	<0.5	<0.5
•	06/16/04	NLPH	0.64	199.70	<50	<50.0	<0.5	_	<0.50	<0.5	<0.5	0.9
	09/15/04r	NLPH	1.20	199.14	<50	<50.0		<0.50	<0.50	<0.5	<0.5	<0.5
	12/15/04	NLPH	0.90	199.44	66	<50.0		<0.50	<0.50	<0.5	<0.5	
MW18									.0100	70.5	~∪.5	<0.5
(202.15)	11/03/04	NLPH	6.02	196.13	481	<50.0		<0.50	0.50	0.8	~0 E	4.4
	12/15/04	NLPH	5.72	196.43	<50	<50.0	_	0.5	<0.50	<0.5	<0.5 0.7	1.4
								0.0	~U.JU	~U.5	V.1	1.7

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 15 of 15)

Noles:		Data prior to First Quarter 1998 provided by previous consultant.
		State prior to first quarter reso provided by previous consultant.
ug/L	=	Micrograms per liter.
NĽPH	=	No liquid-phase hydrocarbons present in well.
TOC	=	Elevation of top of well casing; relative to mean sea level (MSL) in feet.
SUBJ	=	Results of subjective evaluation.
sheen	=	Liquid-phase hydrocarbons present as a sheen.
DTW	=	Depth to water.
Elev.	=	Elevation of groundwater; relative to mean sea level.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 5030/8015 (modified).
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 5030/8015 (modified).
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
MTBE	=	Methyl tertiary bulyl ether analyzed using EPA Method 8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	l ertiary butyl alcohol analyzed using EPA Method 8260B.
EDB	=	1,2-Dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-Dichloroethane.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
ND	=	Not detected above the laboratory method reporting limit.
<	=	Less than the stated laboratory method reporting limit.
-	=	Not sampled/Not measured.
a	=	Monitoring well sampled on an annual basis.
ь	=	Laboratory analytical chromatogram pattern: unidentified hydrocarbons C9-C24.
C	=	vveii inaccessible.
d	=	Previous consultant's data deemed suspect by ERI.
e f	=	Diesel-range hydrocarbons detected in bailer blank, result is suspect.
•	=	Analyzed using EPA Method 8260B.
g h	=	Artesian well.
i	=	Estimated value between Method Detection Limit and Practical Quantitation Limit.
;	=	Diesel-range hydrocarbons detected; however, laboratory indicates that chromatogram pattern does not resemble diesel fuel.
1	-	1 90 devarious not measured according to AB 2886. Groundwater elevation not used in calculated groundwater flow discalleges to
k	=	nyaradio gradioni,
ì	=	Diesel-range hydrocarbons laboratory control data values outside laboratory historical or method prescribed QC limits.
m	=	Cultogate out of failige.
0	=	DRO extraction outside holding time. Not sampled due to breakage.
Þ	=	NOC sampled due to preakage.
q q	=	DRO extraction sampled temperature above acceptable range. No groundwater recharge after purging.
r T	=	Sampling date on the Contact to the August 19 to the August 19 to
s	=	Sampling date on Chain-of-Custody inadvertantly listed as 09/16/04. The correct sampling date is 09/15/04. Groundwater elevation data invalidated; analytical results
-		Croditativation data invatidated; analytical results

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 1 of 17)

Well ID#	Sampling Date	<	TAME	TBA	EDB	1,2-DCA ug/L	DIPE	Ethanol	Methanol
MW1	06/22/88					<u> </u>			
	09/02/88		_				_	_	_
	01/26/89		_				_	_	
	02/18/90		_					_	_
	03/13/90						_	_	_
	03/27/89		_				_		_
	04/25/89		_					_	_
	07/26/89			_			_		<del></del>
	10/24/89		_	_			_	_	_
	12/18/89	_		_	_			-	
	01/26/90	_			_			_	
	04/19/90	_	<b>-</b>		_	_		_	_
	07/26/90		_						<u> </u>
	10/11/90					_	_		
	04/23/91		_	_			_	_	
	07/25/91		_	_		_	_		
	10/03/91		_					_	_
	01/20/92	_	_			_	_		_
	04/30/92		_				_		<del></del>
	11/02/92						_		
	12/07/92					_			
	03/29/93	_		-	_	_	_	_	
	06/16/93				_		_	_	
	07/26/93	—	_		<del></del>	_	_	_	
	01/19/94		_				_	_	_
	07/25/94		_	_			_	_	
	01/26/95		_						_
	07/26/95			_		_	<del></del>	<del></del>	<del></del>
	01/18/96		_	_		_	_		
	01/16/97						_	_	_
	04/21/97	<del></del>	_		<del></del>	_	_		_
	07/09/97	_	_		<del></del>				
	10/27/97	_				_			
	03/25/98	<2.0	<2.0	<100		_	<2.0	<500	_
	06/11/98		_	_		_	_	-	
	09/10/98								
	12/15/98	_	-	_				_	
	03/09/99						_		
	06/28/99					_	_		
	09/21/99		_	_					
	12/27/99		_	_					
	03/27/00	_			_				
	06/13/00			_				_	
	06/16/00	Property tra	ansferred to	Valero Ref	fining Comp	anv		_	
	09/21/00	-			_		_	_	
	12/27/00			_	_		_	_	
	03/26/01	_					_	_	
	06/29/01	_			_		_		_
	09/24/01		_	_		_	_		
	12/26/01	-	_			_		_	_
	03/26/02	-	-	_	_			_	_
	06/24/02	_			_	_	_	_	_
	09/23/02					_	_	_	
	12/31/02		_	_		_			<del></del>
	03/28/03								
	06/05/03	_		_					
							_	_	_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 2 of 17)

Well ID#	Sampling Date	ETBE <	TAME	ТВА	EDB	1,2-DCA ug/L	DIPE	Ethanol	Methanol
MW1 (cont.)	09/09/03								>
	12/01/03		_					_	
	03/23/04	<0.50	< 0.50	32.1	<0.50	<0.50	<0.50	-	
	06/16/04		_		-0.00			 -EO O	
	09/15/04r		_		_		-	<50.0	
	12/15/04	<0.50	<0.50	26.9	<0.50	<0.50	<0.50	 <50.0	<10,000
MW2	06/22/88	_							
	09/02/88	_	_						
	01/26/89	_		_			_		
	03/27/89		_	<b></b>			_		
	04/25/89	_	_		_				<del>_</del>
	07/26/89	_	_				_	_	
	10/24/89		_						
	12/18/89		_	<del></del> -	_			_	
	01/26/90						_	_	
	02/18/90	_				_	_		<del></del>
	03/13/90	_		_			-		
	04/19/90								
	07/26/90	_		_					
	10/11/90					_			
	04/23/91		_	_		_			
	07/25/91	_			_	_	_		_
	10/03/91		_		_		_	_	
	01/20/92	_		_	_			_	
	04/30/92			_				_	
	11/02/92			_		_			_
	12/07/92	_				_		_	
	03/29/93	_							
	03/29/93	_		_					
	01/19/94	_	_		_		-		
	07/25/94	_	_						
			_		_		_		
	01/26/95	_			_				
	07/26/95		_		<del></del>	-			
	01/18/96	_				_		_	
	01/16/97	_		_		_			
	04/21/97				_	_	_		
	07/09/97				_		_	_	
	10/27/97	_	_	_	_		_		
	03/25/98	<2.0	<2.0	<100	_		<2.0	<500	
	06/11/98	_	_	_	_		<b></b>	_	
	09/10/98	<del>-</del>			_		_	_	_
	12/15/98	_	_		_			_	-
	03/09/99	_	_		_		_	_	_
	6/28/99a	_	_	_	_	-	_	_	_
	09/21/99	_		_		_			
	12/27/99		_		_	_	_		<del></del> -
	03/27/00				_		_	_	
	06/13/00	_		_		_			
	06/16/00	Property tra	ansferred to	Valero Ref	fining Comp	anv	_		_
	09/21/00		_		g Oomp				
	12/27/00	_		_	<del>-</del>		_		_
	03/26/01	_				_		_	_
	06/29/01	<del></del>		_		_	_	-	_
	09/24/01		_	_		_	_		
	12/26/01		_		_		_	_	
	03/26/02		_	_				_	
	06/24/02		_	_	_				
	00124102				_				_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 3 of 17)

Well ID #	Sampling	ETBE	TAME	TBA	EDB	4.0 004	Dipe		<del></del>
	Date	<	TAIVIL	IDA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
MW2 (cont.)	09/23/02					ug/L		<del></del> :	<u>&gt;</u>
14142 (COTIL.)	12/31/02					_		-	
	03/28/03					_			<del></del>
		_		_					
	06/05/03			_					
	09/09/03	_			-	-			
	12/01/03			_					
	03/23/04	<0.50	<0.50	<10.0	<0.50	< 0.50	<0.50		
	06/16/04	_					_	<50.0	
	09/15/04г	_	-						
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<50.0	<10,000
MW3	06/22/88		_	_	_				
	09/02/88	_	_		_	_	_		
	01/26/89	_			_	<del></del>	_	_	
	03/27/89	-	_		_	<del></del>			
	04/25/89		_		_			_	
	07/26/89			_	_				
						_	_		
	10/24/89	_		_		_	_	_	
	12/18/89			_		_	_		
	01/26/90					_			
	02/18/90		_	_		—	_		
	03/13/90		_				_	_	
	04/19/90		_		_				
	07/26/90	_	_		_				
	10/11/90	_	_		_				_
	04/23/91	_	_		_				_
	07/25/91	_	_		_				
	10/03/91						_		
	01/20/92			_		_	_	_	
	04/30/92	_						_	_
	11/02/92	_		_		_		_	
	12/07/92	_						_	
	03/29/93	_				_	_	_	
	07/26/93		_				_	-	_
	08/24/93	_				_	<del></del>	<del></del>	_
	09/22/93	_	_		_				_
	10/06/93	_	_	_	<del></del>	_		_	<del></del>
	11/08/93			_	_	_	_	_	_
			_	_	_		_	_	
	12/07/93		_		_		<del></del>		_
	01/19/94	-	_			-			_
	07/25/94	_	_		_				
	01/26/95	-	_		_				
	07/26/95		_		_				
	01/18/96		_						
	01/16/97	_	_		_	_	_	_	
	04/21/97	_		_	_	_	_	_	_
	07/09/97	_		_					_
	10/27/97		_		_				
	03/25/98	<6.7	<6.7	<330		_	<6.7	<1,700	ND
	06/11/98	_		_		_	-0.1	~1,700	
	09/10/98			_	_		_	_	
	12/15/98				_				_
	03/09/99		_		_				_
	06/28/99		_				_		
	09/21/99		_		_				
	12/27/99				_		_		
	03/27/00		_		_	_			
	06/13/00		_		_		-	_	
	00/13/00	_	_		_	_	_		

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 4 of 17)

Well ID#	Sampling	ETBE	TAME	ТВА	EDB	1,2-DCA	DIPE	Ethanol	Methano
	Date	<				ua/l			
MW3 (cont.)	06/16/00	Property to	ransferred	to Valero Re	fining Com	pany			
	09/26/00					·	_		
	12/27/00			_	_	_			
	03/26/01			_				=	_
	06/29/01				-		_		
	09/24/01	_				_		_	
	12/26/01			***				_	
	03/26/02	_					_		
			_	_					
	06/24/02					_			
	09/23/02								
	12/31/02	_		_	<b></b>	<del>_</del>			
	03/28/03			_	_	_	-		
	06/05/03			_	_				_
	09/09/03				_	<del></del>			
	12/01/03			_		_	_		
	03/23/04	<0.50	<0.50	400	_		_		
	06/16/04	~0.50	<b>~</b> 0.50	123	<0.50	<0.50	<0.50		
		<del></del>	_		_	_		<50.0	
	09/15/04г		_	_	_	_			
	12/15/04	<0.50	<0.50	56.2	<0.50	<0.50	<0.50	<50.0	<10,000
MW4	06/22/88		_		_	_	_		
	09/02/88	_				-			
	01/26/89	_						_	
	03/27/89		_		_			_	
	04/25/89	_	_					_	_
	07/26/89		_					_	_
		_						_	
	10/24/89	_						_	_
	12/18/89							_	
	01/26/90			_		_			
	02/18/90	_					<del></del>		
	03/13/90			_		_			
	04/19/90	_						_	
	07/26/90	_							_
	10/11/90		_						
	04/23/91			<del></del>			_		
	07/25/91			_	_	_	_		
				_	_	_			
	10/03/91	-			_	_	-		
	01/20/92			_	_				
	04/30/92			_	_	_		_	
	11/02/92			_	_	_	_		_
	12/07/92		_	_	_		_	_	_
	03/29/93		_	_			_	_	
	07/26/93	-	<del></del>		_	_		_	
	01/19/94			_				_	_
	07/25/94							_	_
	01/26/95		_						_
		_	_		_	_	_		
	07/26/95			_	_	_	_		
	01/18/96	_		-				_	
	01/16/97	_	_	_		_			
	04/21/97	_	_	_	_	_	_		
	07/09/97		_	_	_		_		
	10/27/97					_	-		
	03/25/98	<2.0	<2.0	-100		_		_	_
	06/11/98			<100	-		<2.0	<500	_
			_				_		
	09/10/98	_	_			_	_	<del></del>	
	12/15/98	_	_	_	_	_	—		
	12/15/98 03/09/99 06/28/99		_	_	_	_	 		

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 5 of 17)

Well ID#	Sampling Date	ETBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
MW4 (cont.)	09/21/99					—ug/L			>
(,	12/27/99	_		<del>_</del>	_	_	_	_	_
	03/27/00			_	_	_	_	-	_
	06/13/00	_		<del></del>				_	_
	06/16/00	Property to	anoformad i		<del>-</del>	_			_
	09/21/00		ansierreo i	o valero Re	efining Com	pany			
	12/27/00		_				_		_
				_	_				
	03/26/01						_		
	06/29/01	_			<b></b>	_	_		boxes
	09/24/01								_
	12/26/01	_	_			_			_
	03/26/02	_				_		_	_
	06/24/02		_		_	_		_	
	09/23/02	_				_			_
	12/31/02					_			
	03/28/03							_	
	06/05/03	_	_					_	_
	09/09/03	_	_					_	_
	12/01/03		_				_	_	_
	03/23/04	< 0.50	< 0.50	<10.0	<0.50	<0.50	<0.50	_	_
	06/16/04		_	_	_	_		<del></del>	
	09/15/04г			_			_	<50.0	
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	 <0.50		
					40.00	<b>~0.50</b>	<b>~0.50</b>	<50.0	<10,000
MW5	06/22/88		_	_	_				
	09/02/88		_				_		
	01/26/89							_	_
	03/27/89					<del></del>			
	04/25/89					<del></del>		_	_
	07/26/89	_			<del>-</del>	_		_	_
	10/24/89		_		7	_		_	
	12/18/89	_				_			
	01/26/90		_						
	02/18/90		_	_	_		_	_	
	03/13/90		_	_	_	_	_		
	04/19/90	_			_	_			
	07/26/90	_			_			_	_
		<del>-</del>	_			_			_
	10/11/90	_	_			_		_	
	04/23/91		_					_	
	07/25/91		_			_		_	
	10/03/91	_					-	_	_
	01/20/92		_	-			_	_	_
	04/30/92		_		_		_	<b></b>	_
	11/02/92			_	_	_	_		
	12/07/92	_				_		_	_
	03/29/93	_	_	_					_
	07/26/93		—	_	_	_			
	08/24/93	_			_	_	_		_
	09/22/93	_				_			_
	10/06/93	_						_	_
	11/08/93	_				_			
	12/07/93						_		
	01/19/94	_							
	07/25/94	_					-		
	01/26/95	_	_		_				_
	07/26/95		_	_			_		_
	01/18/96		_	_	_	_	_		
	01/16/97	_				_		_	_
	-1110101	<del></del>	_				_	_	_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 6 of 17)

Well ID#	Sampling	ETBE	TAME	ТВА	EDB	1,2-DCA	DIPE	Ethanol	Methanol
MAINT (A)	Date	<del></del>				ug/L			<del></del> >
MW5 (cont.)	04/21/97	_	_	_		_			
	07/09/97	_				_			_
	10/27/97	_			_		_		****
	03/25/98	<2.0	<2.0	<100	_		<2.0	<500	5,700
	06/11/98		_	_					5,100
	09/10/98								
	12/15/98	_							
	03/09/99					<del>_</del>			_
	06/28/99	_				_ <del>-</del>	_		
	09/21/99	_				<del></del>			
	12/27/99	_				<del></del>			
	03/27/00	_			_	<del></del>			
	06/13/00	_				_			
	06/16/00	Droportu t	— 	 - \/-  D-	<u> </u>		_		
	09/26/00	r topeity ti	ransferred t		TIRING COM	oany			
		_			-	_			_
	12/27/00	_			_	_			
	03/26/01				_		_		
	06/29/01				_	-			
	09/24/01			_					
	12/26/01	-						_	
	03/26/02				_				
	06/24/02			_	_		_		
	09/23/02				_			_	
	12/31/02	_			_		_		
	03/28/03			_	_	-	_	_	
	06/05/03	_	_			_		-	
	09/09/03	_	_		_	_	_		_
	12/01/04	_			_		_	-	_
	12/02/03				_	_	_		_
	03/23/04	<0.50	<0.50	49	<0.50	<0.50		_	
	06/16/04			43	<b>~0.50</b>		<0.50	_	
	09/15/04г	_		_	<del></del>		<del></del>	<50.0	
	12/15/04	<0.50	<0.50	48.5	-0 E0				
	12 10,04	40.50	~0.50	40.0	<0.50	<0.50	<0.50	<50.0	<10,000
MW6	06/22/88								
141140	09/08/88					_			
	01/26/89	_	_		_	_	_		
		_	_		_	-	_	_	
	03/27/89	_	<del></del>				_	_	
	04/25/89	_	_		_	_	_		
	07/26/89	_	_			-	_		
	10/24/89	_	_		_				
	12/18/89	_			_		_	_	
	01/26/90			_				_	_
	02/18/90	-	_	_		_			_
	03/13/90	_		-	_	_	_		
	04/19/90				_			_	
	07/26/90			_	_		_		_
	10/11/90			_				_	_
	04/23/91		_	_				***	_
	07/25/91	_	_	_		_			
	10/03/91	_	_	_					_
	01/20/92	_	_			_			_
	04/30/92	_	_		_	_	_		_
	11/02/92	_	_	_		-	_		_
	12/07/92				_		_	_	
	03/29/93			_	_		-	_	_
	06/16/93	_	_		_	_			_
		_	_		_		_	_	
	06/29/93		-	_		_			_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 7 of 17)

Well ID#	Sampling Date	ETBE	TAME	TBA	EDB	1,2-DCA ug/L	DIPE	Ethanol	Methanol
MW6 (cont.)	07/26/93					<u> </u>			
	08/24/93	_		_	_		_	<del></del>	
	09/22/93					_			
	10/06/93								
	11/08/93					<del></del>			
	12/07/93			<del>_</del>	_				_
	01/19/94				_		_		
	07/25/94								
	01/26/95			_	_	_	_		
	07/26/95				_	_			
	01/18/96	_		_	_			_	
	01/16/97	_	_		_				
		_	_	_	_			_	
	04/21/97	_	_	_	_			_	
	07/09/97	_			_		-	_	
	10/27/97			_	_	_			
	03/25/98	_	-		_		_		
	06/11/98					_			
	09/10/98		_	_	_				
	12/15/98	_	_	_	_				
	03/09/99	_		_	_				
	06/28/99		_	_	_		_		_
	09/21/99	_	_	_	_		<u>-</u>	_	
	12/27/99							_	_
	03/27/00		_				-	_	
	06/13/00	_	_	_				_	
	06/16/00	Property to	raneferred t	o Valoro Bo	efining Comp	_	<del></del>		
	09/21/00		unsichte (	o valeto Re	aning Comp	Dany			
	12/27/00				_	_	_		
	03/26/01	_		_	_	_			
	06/29/01	_	_				_		***
			_			-		-	
	09/24/01		_	_					
	12/26/01						_		
	3/26/02k	_		_	_		_	_	_
	6/24/02k	_	-	_	_				_
	09/23/02	_		_			_		
	12/31/02		_	_	_				
	03/28/03	_	_	_				_	
	06/05/03		_	_					_
	09/09/03		_	_	_				_
	12/01/04		_	_	_			_	_
	03/23/04	< 0.50	< 0.50	<10.0	< 0.50	<0.50	<0.50	_	_
	06/16/04	C	С	С	C	C	C		
	09/15/04r			_		C		С	С
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	 <0.50	 <50.0	 <10,000
MW7	08/12/88		_						,
	09/02/88		_					_	_
	01/26/89	_	_	_	_		_		_
	03/27/89	_	_	_	_		_		
	04/25/89		_	_	_	_	_		
			_	_	_	-	_	_	
	07/26/89		_	_	_		_		
	10/24/89	_		_	_	_	_		
	12/18/89	_			_	_	_		_
	01/26/90		_			-			_
	02/18/90			_			_		
	03/13/90		_	_	_	_	_		_
	04/19/90	_		-	_	_	_	-	
	07/26/90		_	_					
			_	_					

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 8 of 17)

Well ID#	Sampling		TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
	Date	<				ug/L			Wictifalioi
MW7 (cont.)	10/11/90					<del></del> _			
	04/23/91			_	_		_		
	07/25/91	_					-		_
	10/03/91	_	_	_	_			_	
	01/20/92		_				_	_	<del></del>
	04/30/92					·			
	11/02/92				_	_			
	12/07/92				_			-	_
	03/29/93		<b></b> -					_	
	06/16/93			<del></del>	_	_			
	07/26/93			_	_	_			_
	01/19/94			_	_		_		_
	07/25/94			_		_	<del></del>		
	01/26/95			_	_		***		
	07/26/95		_		_	_		_	
	01/20/95			_	_	_			
						<del></del>			_
	01/16/97	_							_
	04/21/97							_	_
	07/09/97	_					_	_	_
	10/27/97	-					_	_	
	03/25/98	<2.0	<2.0	<100			<2.0	<500	_
	06/11/98							_	
	09/10/98		_	_		_		_	
	12/15/98	_	_	_	_	_		_	_
	03/09/99	_	_	_	_	_	_	<u>-</u> _	_
	06/28/99	_	_	_	_		_		-
	09/21/99	_		_	_	_			
	12/27/99		_	_	_	_		_	_
	03/27/00						_	_	
	06/13/00	_					_	<del></del> -	
	06/16/00	Property t	ransferred t	o Valero Re	fining Comp	pany			
	09/21/00	_	_	_		<i>'</i> —	_		
	12/27/00	-	_	_	_	_			
	03/26/01		_	_	_	_			_
	06/29/01	_	_		_	_		_	_
	09/24/01			_	_			_	_
	12/26/01	_	_	_	_	_		_	_
	03/26/02		_	_		_		-	_
	06/24/02	_		_	_			_	
	09/23/02						<del></del>		
	12/31/02		_	_	_	_	<del>-</del>	<del></del>	<del></del> -
	03/28/03				***			_	_
	06/05/03	_		_	_	_			
	09/09/03						_	_	_
	12/01/04		_	<del></del>	_	_			
	03/23/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50		
	06/16/04	-	_	_		_		<50.0	
	09/15/04г		_	_	_	_		-00.0	_
	12/15/04	<0.50	<0.50	<10.0	< 0.50	<0.50	<0.50	<50.0	<10,000
					-		7.50	-00.0	~ 10,000
8WM	08/12/88	_	_	_	_	_			
	09/02/88		_	_		<del></del>		_	
	01/26/89						_	_	_
	03/27/89	_		_			_		<del></del>
	04/25/89	_	_	_	_		_		
	07/26/89						_		_
	10/24/89		_	_	_		_	_	
	01/26/90	_		<del>_</del>	_	_	_		_
	04/19/90			_	_	_		_	
		_		_			_		

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 9 of 17)

Well ID#	Sampling	ETBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
	Date	<				ug/L		20101101	- <del></del> >
MW8 (cont.)	07/26/90								
	10/11/90								_
	04/23/91		_		_	<del></del>			
	07/25/91	_		_			_		
	10/03/91	_							_
	01/20/92								_
	04/30/92								
	11/02/92		_		_			_	
	12/07/92		_	_		_			n=-
	03/29/93			_	-	_			
			-			_			
	06/16/93					_	_	_	
	07/26/93			_	_	_	_	_	
	01/19/94	_	-				_	_	
	07/25/94	_			_	_			
	01/26/95			_		_			_
	07/26/95		_		_	_	_	_	_
	01/18/96		_		_		_		_
	01/16/97	_	_		_		_		
	04/21/97	_			_		_	_	
	07/09/97		_		_		_	_	
	10/27/97			_				_	-
	03/25/98	<2.0	<2.0	<100		_	_	_	_
	06/11/98	-2.0		~100			<2.0	<500	_
	09/10/98			_					_
	12/15/98			_				_	_
				_	_	_	_	_	
	03/09/99		_	_				_	
	06/28/99	_	_		_	<del></del>		_	
	09/21/99				_		<b></b>		
	12/27/99		_						
	03/27/00				_				
	06/13/00						_		
	06/16/00	Property tr	ansferred t	o Valero Re	fining Comp	pany			
	09/21/00		_		_	<del></del>	_	_	
	12/27/00		_	_		_	_	_	_
	03/26/01		_	_		_	_	_	
	06/29/01		_	_		_		_	_
	09/24/01		_	_	_		_	_	_
	12/26/01	_	_		_			_	
	03/26/02	_	_		_		_	_	
	06/24/02	_		_			_		_
	09/23/02		_	_	- <del></del>	_			_
	12/31/02	_				_		_	
	03/28/03				_		_	_	
	06/05/03			_	_				_
	09/09/03	_		_		_			_
		₩.		_		_	_	_	
	12/01/04		_	_		_	_	_	
	12/02/03		_	_	_	_	_		_
	03/23/04	<0.50	<0.50	16.4	<0.50	<0.50	<0.50	_	
	06/16/04	_	_		_			<50.0	_
	09/15/04r	<del>-</del>	_		_				_
	12/15/04	<0.50	<0.50	14.4	<0.50	<0.50	<0.50	<50.0	<10,000
MW9	08/12/88			_	_	_		_	
	09/02/88	_	_			_			_
	01/26/89	_		_		_	_		
	03/27/89	-		_		_	_	_	
	04/25/89		_	_	_		_	_	
	07/26/89				_			_	_
						_			_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 10 of 17)

Well ID#	Sampling		TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
BAIAIO (aa-ti)	Date	<u> </u>				ug/L			<del>&gt;</del>
MW9 (cont.)	10/24/89		_		_				_
	12/18/89	_	_		_	_			_
	01/26/90	_		_	-	_	-		
	02/18/90			_				_	
	03/13/90	_		_		_	_	_	
	04/19/90			_					
	07/26/90	-		_		_			
	10/11/90			-		_	_		_
	04/23/91			_			_	_	_
	07/25/91		_					_	_
	10/03/91		_		_		_		
	01/20/92		_		_				_
	04/30/92	_	_			_			
	11/02/92			_					
	12/07/92			_		_	_		
	03/29/93	_		_				_	
	06/16/93	_		_				_	
	07/26/93	_			_	_			
	01/16/94				_				
	07/25/94		_		_				_
	01/26/95		_		_				_
	07/26/95		_		_			_	
	01/18/96		_		_				_
	01/16/97	_	_		_				_
	04/21/97	_	_		_	_			_
	07/09/97	_		_	_	_	_		
	10/27/97	_		_		_	_	_	
	03/25/98	<2.0	<2.0	<100		_	<2.0	<500	
	06/11/98	_		_					
	09/10/98	_		_		_	_		
	12/15/98	_		_		_	_		
	03/09/99	_			_			_	_
	6/28/99a	_		_		_		_	_
	09/21/99	_			_			_	
	12/27/99	_				_	_	_	
	03/27/00	_					_		
	06/13/00		_	<del></del>		-			_
	06/16/00	Property tr	ansterred to	o Valero Re	fining Comp	any			
	09/21/00	_		_		_		_	
	12/27/00	_		_		_	_	_	-
	03/26/01		_	_			_	_	
	06/29/01		_	-	_		-		_
	09/24/01						-		_
	12/26/01		_	-	_	-			_
	03/26/02	_					_	_	_
	06/24/02		_	-		_	_	_	_
	09/23/02		_		_				_
	12/31/02		_		_				-
	03/28/03	_		_		_	_	_	
	06/05/03	_		_		_	_		
	09/09/03	-				_	_		
	12/02/03		_		_				_
	03/23/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50		
	06/16/04	_		_		_	_	<50.0	_
	09/15/04r			<del></del>			_	_	_
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<50.0	<10,000

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 11 of 17)

Well ID#	Sampling Date	ETBE	TAME	TBA	EDB	1,2-DCA ug/L	DIPE	Ethanol	Methanol
MW10	08/12/88					ugrL			<u> </u>
	09/02/88	_	_	_	_	_		_	
	01/26/89	_	_	_	_	_		_	
	03/27/89		_			_			
	04/25/89	_	_	_					
	07/26/89								
	10/24/89	_	_						
	12/18/89	_	_						<b></b>
	01/26/90		<del></del>			<del>_</del>			
	02/18/90					<del></del> -			
	03/13/90								
	04/19/90	_	_						_
	07/26/90	_	_					_	
	10/11/90	_	_		_			_	_
	04/23/91	_	_		_	_		_	_
	07/25/91	_	_	_	_	_	_	_	
	10/03/91	_	_			_	_		_
	01/20/92	_	_	_	_	_			
	04/30/92	_	_		_	_	_		_
	11/02/92		_	_	_	_	_		
	12/10/92	_	_	_	_		_		
	03/29/93	_		_	_	_		_	_
	03/29/93		_	_	_	_			
	08/24/93				_	_	_	_	
	09/22/93 10/06/93						_		_
						<del>-</del>			
	11/08/93			<del></del> -					
	12/07/93								
	01/19/94			_			_		
	07/25/94	_	_	_	_	_	_	_	
	01/26/95	_	_	_	_			-	
	07/26/95	_	_	_	_	_			
	01/18/96	_	_	_	-	_		_	
	01/16/97	_	_	_	_	_		_	
	04/21/97	_		-			_	_	
	07/09/97								_
	10/27/97			_		_		•	_
	03/25/98	_	_	_	_	_	_	_	_
	06/11/98	_	_		_	_	***	_	
	09/10/98	_	_	_	_	_		_	
	12/15/98			_	_			_	
	03/09/99	_	<del></del>			_	_	_	
	06/28/99	_		-	_		_	_	
	09/21/99	-			-		_	<del></del> .	-
	12/27/99						_		_
	03/27/00			_			_	_	_
	06/13/00	_ —	_	_	_	_		_	_
	06/16/00	Property tr	ansferred to	Valero Re	fining Comp	pany			
	09/21/00			_	_	_		_	_
	12/27/00	_		_	_	_			_
	03/26/01	_	_	_		_		_	
	06/29/01	-					_		_
	09/24/01						_		_
	12/26/01					_		_	
	03/26/02	-	_	_		_		_	
	06/24/02	_	_	_	_	_		_	

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 12 of 17)

Well ID#	Sampling		TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
MW10 (cont.)	Date	<del></del>				ug/L		<del></del>	<u></u> >
MINA IO (COUL"	09/23/02								
	12/31/02		_			_	_	_	_
	03/28/03			_		_			_
	06/05/03			_		_			
	09/09/03			_		<del></del>			
	12/02/03	_			_				
	03/23/04		_		_	-			_
	06/16/04		_		_	_		<50.0	<del></del> -
	09/15/04r	· <u></u>	<del></del>	_				<b>\30.0</b>	
	12/15/04		<0.50	59.5	<0.50	<0.50	<0.50	< <b>50.0</b>	<10,000
MW11	00107100								110,000
ININATI	06/27/88	_	_		_				
	09/02/88		_			_			
	01/26/89	_	_	_		_			
	03/27/89	_							
	04/25/89	_			_				_
	07/26/89	_			_				
	10/24/89	_							_
	12/18/89	_		_					<del>-</del>
	01/26/90	_		· —					_
	02/18/90	_	_		_				_
	03/13/90	_			_				_
	04/19/90				_				<del></del>
	07/26/90		_		_	_	_		
	10/11/90		-	_		_	_	_	
					_		_		
	04/23/91		_		_	_	_	_	
	07/25/91		_			_	_		
	10/03/91	_	_		_				_
	01/20/92	_			_				
	04/30/92	_	_	_	_				
	11/02/92	_							<del></del>
	12/10/92	_		_	_		***		_
	03/29/93					_		700	
	06/16/93		_		_	_			
	07/26/93	_		_			_	_	
	01/19/94	_		_		_	_	_	_
	07/25/94			_			_		_
	01/26/95	-	_		_	_			_
			_		_	_	_	_	
	07/26/95		_			_	_	_	
	01/18/96		_			_	_	_	
	01/16/97		_		_	_	_	_	
	04/21/97		_		-	_	_		
	07/09/97		_	_	_	_	_		
	10/27/97		_	_		_	_		_
	03/25/98		_	_		_	_	_ <del>-</del>	_
	06/11/98			_			_		_
	09/10/98	_			_				
	12/15/98		_						
	03/09/99		_			_	_	_	_
	6/28/99a	_ <b>_</b>		_		_		<del></del>	_
	09/21/99	_		_	_				-
		_			_				
	12/27/99		_		_				
	03/27/00		_		_	_		_	
	06/13/00	_	_		_		_	_	
	06/16/00	Property tra	nsferred to	Valero Refi	ining Como	апу			
	09/21/00		_		—		_	_	
	12/27/00	_	_				_	_	
	03/26/01			_		<del></del>	_	_	
			_	_		_	_		_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 13 of 17)

Well ID#	Sampling Date	ETBE <	TAME	TBA	EDB	1,2-DCA ug/L	DIPE	Ethanol	Methan
VW11 (cont.)	06/29/01					ug/L			_===
	09/24/01	_	_	_	_			_	_
	12/26/01		_	_	_	_		_	_
	03/26/02		<b></b> -			<del></del>		_	
	06/24/02					<del></del>			
	09/23/02	_					_		
	12/31/02		<u></u>				_		
	03/28/03	_	_						
	06/05/03	_		_					
	09/09/03		_		_	_		_	_
	12/01/03		_	_	_				
	03/23/04	_	_	_		_		_	
		q	q	q	q	q	q	q	q
	06/16/04	q	q	q	q	q	q	q	q
	09/15/04r	q	q	q	q	q	q	q	q
	12/15/04	q	q	q	q	q	q	q	q
MW12	06/27/88		_	_	_	_	_		
	09/02/88		_	_	_	_		_	_
	01/26/89			_	_			_	_
	03/27/89								
	04/25/89	_							
	07/26/89	_	_				_	_	-
	10/24/89	_	_	_	-	_			
	12/18/89	_		_		_	_		
	01/26/90	_	_			_	_		-
	02/18/90	_	_				_		
	03/13/90						_		
	04/19/90	_					_	_	
	07/26/90			_				_	
			_					_	
	10/11/90								
	04/23/91					<del></del>	_	_	
	07/25/91	_					<del></del>		
	10/03/91	_					_		
	01/20/92	_	_	_			_		
	04/30/92	-	_	_	_				
	11/02/92	_	_	_	_	_			
	12/10/92	-	_	_	_	_	<b></b> -		_
	03/29/93	-	_	_	_			_	
	06/16/93	_	_			_		_	
	07/26/93	_	_	_	_	_		_	_
	01/19/94	_	_		_	_	_	_	_
	07/25/94	_	_	_	_		_	_	
	01/26/95				_	_		_	
	07/26/95							_	
	01/18/96	_	_				_		
	01/16/97	_		_	_	_	_	_	_
	04/21/97		<del></del>		-	_		_	
	07/09/97	-					_		
		_	_	-	_	_	_	_	_
	10/27/97	_	_	_	_	_		_	
	03/25/98	-	_	_	-			_	
	06/11/98			-		_			
	09/10/98						_		
	12/15/98								
	03/09/99	/09/99				_		_	
	06/28/99	_							
	09/21/99	_	_	_	_				_
	12/27/99			_		<del></del>		_	

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 14 of 17)

Well ID #	Sampling	ETBE	TAME	TBA	- FDD	40.504	5.55	<del></del>	
770.10 %	Date	<- <del></del>	IAIVIE	IDA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
MW12 (cont.)	06/13/00					ug/L			<del>&gt;</del>
` '	06/16/00	Property tr	ansferred t	o Valero Re	efining Com				
	09/21/00	— —	_			party			
	12/27/00		***	_		_			_
	03/26/01						_	_	
	06/29/01	_			_	_	_	_	
	09/24/01								
	12/26/01			_		<del></del>			
	03/26/02					_	_		<del></del>
	06/24/02			<u>—</u>				_	
	09/23/02				_			_	
	12/31/02	_		_	-	_	_		
	03/28/03			_	_	_	_	_	
	06/05/03	_	_	_			_	_	
	09/09/03	_		_			_	_	
	12/01/03								
	03/23/04	<0.50	< 0.50	<10.0					
	06/16/04			<10. <del>0</del>	<0.50	<0.50	<0.50	_	
	09/15/04r			_	_		_	<50.0	
	12/15/04	<0.50	1.00	<10.0			_		
	1211010-	<b>~0.50</b>	1.00	<10.0	<0.50	<0.50	<0.50	<50	<10,000
MW13	04/19/90		_		_				
	07/26/90		_						
	10/11/90								_
	04/23/91		•	_	_		_	_	
	07/25/91			_				_	
	10/03/91		_	_		_		_	
	01/20/92		_				_	_	
	04/30/92	_		_					
	11/02/92	_				_	_		_
	12/10/92			_		_			
	03/29/93					<del></del>	_		
	06/16/93				_			_	
	07/26/93		_	_	_				_
	01/19/94		<del></del>	_	_	<del></del>			_
	07/25/94	_		_		_	_	_	
	01/26/95					_		_	
	07/26/95	_				_		_	
	01/18/96	_				_	_	_	
	01/16/97	_				_	_	_	
	04/21/97	_				_	_	_	
	07/09/97	_		_		_			
	10/27/97		_				_	_	
	03/25/98	_	_		_				_
	06/11/98	_	_						_
	09/10/98					_		_	
	12/15/98				_				_
	03/09/99								
	6/28/99a	_	_	-	_	_		-	
	09/21/99	_		_		_	_		
	12/27/99		_		_	_		-	
	03/27/00	_	_	_	_	_	_	_	
	06/13/00	_	_	_		_	_	_	
	06/16/00	Property tra	 ineferred to		 inina Co			_	
	09/21/00	- Toperty (Ia	malenteu (O	valero Ket	uing Comp	any			
	12/27/00	_		_			_	_	
	03/26/01		_	_	_				_
	06/29/01	_	_		<del></del>	_			
	JUI 2010 1	_	_	_		-	_	_	

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 15 of 17)

Well ID #	Sampling	ETBE	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
	Date	<u> </u>				ug/L		— Luianoi	IVIEUIAIIOI
MW13 (cont.)						-9/-			
	12/26/01		_		_	_			_
	03/26/02		_	_	_			-	_
	06/24/02					_			
	09/23/02	_	_					_	
	12/31/02	_	_						
	03/28/03						_		
	06/05/03		_				<del></del>		
	09/09/03			_			<del>_</del>		
	12/01/03	<del></del>	_		_				
	03/23/04	< 0.50	< 0.50	<10.0	<0.50	<0.50	<0.50		_
	06/16/04	_	_	_					
	09/15/04r							<50.0 —	
	12/15/04	< 0.50	<0.50	<10.0	<0.50	<0.50	<0.50		<del></del>
					.0.00	₹0.50	<b>~0.50</b>	<50.0	<10,000
MW14	04/19/90			-					
	07/26/90	_	_	_			-		
	10/11/90		_				_		
	04/23/91		_		_	<del></del>	_		_
	07/25/91			_	_	_			_
	10/03/91			<b></b>	_			_	
	01/20/92	_			_			_	_
	04/30/92				_	-			_
	11/02/92			_	_				_
	12/10/92		_	_	_	_			_
	03/29/93	***	_	<del></del>	_				
	06/16/93		<del></del>	<del></del>					_
	07/26/93		- <del>-</del>	_			_		_
	01/19/94		_	_	_		-	_	
	07/25/94				_	_		_	_
	01/26/95	_			_	_			
	07/26/95	_	_					_	<del></del> -
	01/18/96	_	_						
	01/16/97	_	_		_		_		
	04/21/97	_	_	_			_		
	07/09/97		-	_	_	_	_		
	10/27/97	_			_		_		_
	03/25/98						_		_
	06/11/98	_				-	_		_
	09/10/98	_	-				_	_	
	12/15/98	_	_		_		_		_
	03/09/99	_	_	_			_	<del></del> -	_
	6/28/99a	_	_	_	_	_	_		
	09/21/99		_	_	_	_		_	<del></del>
	12/27/99	_		_			_	_	
	03/27/00	_			_				
	06/13/00	_	_	_	_	_	_	_	_
	06/16/00	Property tea	 potomod to	— Valent D-5	_		_	_	
	09/21/00	Property tra		valero Refi	ning Compa	any			
	12/27/00						_		_
	03/26/01	_					_		_
	06/29/01	_				-	_		
	09/24/01	_	_		_	_	-		_
	12/26/01	_	_	_	_	_		_	
		<del></del>	_	_	_	_		_	
	03/26/02			_		-		_	
	06/24/02				-		_		_
'	09/23/02	_	_	_	_	_		_	
	12/31/02						_		_

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 16 of 17)

Well ID#	Sampling	ETBE	T A B 4-	TD:		10.55			
4400 ID #	Sampling Date	<	TAME	TBA	EDB	1,2-DCA	DIPE	Ethanol	Methanol
MW14 (cont.)	03/28/03					ug/L			<del>&gt;</del>
, ,	06/05/03		_		_		_	_	
	09/09/03			_					-
	12/01/03		_	_		_			
	03/23/04	< 0.50	< 0.50	<10.0	<0.50	< 0.50	<0.50		
	06/16/04	_	_		_	_		<50.0	
	09/15/04r	_	_		_			_	
	12/15/04	<0.50	<0.50	59.5	<0.50	<0.50	<0.50	<50.0	<10,000
MW15	06/13/00	_	_		_				
	06/16/00	Property t	ransferred t	to Valero Re	efining Com	nanv	_	_	
	09/21/00					<del>-</del> -			
	12/27/00	_	_		_	_	_	_	
	03/26/01	_			_			_	
	06/29/01				_				
	09/24/01			_				_	
	12/26/01		_						
	03/26/02	_				_	_		<b></b>
	06/24/02	_	_	<b></b>		_			
	09/23/02		_	-	_	_		_	
	12/31/02	_	_	_	-				
	03/28/03		_	_		_			
	06/05/03			_		_			
	09/09/03	-		_	_		_		
	12/01/03			_	_		_	_	
	03/23/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	_	_
	06/16/04			_	-		-	<50.0	
	09/15/04r								_
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<50.0	<10,000
RW1	1/16/97 R\\/	1 not earn	lad 1/16/07	to data. Na		nalytical data			
	3/26/2002	— —			previous a	naiyticai data	available.		
	06/24/02	_	_		_	_	_	_	
	09/23/02	_	_			_	_		
	12/31/02	_	_	_			_	_	
	03/28/03	_	_	_		_		_	_
	06/05/03	_	_	_		_			
	09/09/03	_	_	_	_	_			_
	12/02/03	_			_	_	_		
	03/23/04			_	_		_	_	
	06/16/04		_	_	_	_	-		_
	09/15/04г	_	_			_		_	
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<50.0	<10,000
MW16									
	12/01/03		_	_					
	12/02/03	_	_	_	-	_			_
	03/23/04	<0.50	<0.50	<10.0	 <0.50	 <0.50		_	***
	06/16/04	_					<0.50		-
	09/15/04г	_	_		_	_	_	<50.0	_
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	 <50.0	
					.0100	10.00	<b>~0.50</b>	~50.0	<10,000
MW17									
	12/01/03		_	_		_	_	_	
	12/02/03		-		_	-	_	_	
	03/23/04	<0.50	<0.50	<10.0	<0.50	< 0.50	< 0.50		_
	06/16/04		_	_				<50.0	
	09/15/04r		_	-		_		_	
	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<50.0	<10,000
MW18	12/15/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	<50.0	<10,000
								- ***	,

#### TABLE 1B

#### ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 17 of 17)

- N		
Notes:		Data prior to First Quarter 1998 provided by previous consultant.
ug/L	=	Micrograms per liter.
NLPH	=	No liquid-phase hydrocarbons present in well.
TOC	=	Elevation of top of well casing; relative to mean sea level (MSL) in feet.
SUBJ	=	Results of subjective evaluation.
sheen	=	Liquid-phase hydrocarbons present as a sheen.
DTW	=	Depth to water.
Elev.	=	Elevation of groundwater; relative to mean sea level.
TPHd	=	Total netroleum bydrosorbons as disselent by the state of
TPHg	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 5030/8015 (modified).
BTEX	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 5030/8015 (modified).
MTBE	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
ETBE	= .	Methyl tertiary butyl ether analyzed using EPA Method 8021B.
TAME	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
EDB	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
1,2-DCA		1,2-Dibromoethane analyzed using EPA Method 8260B.
DIPE	=	1,2-Dichloroethane.
ND	=	Di-isopropyl ether analyzed using EPA Method 8260B.
ND <	=	Not detected above the laboratory method reporting limit.
	=	Less than the stated laboratory method reporting limit.
_	=	Not sampled/Not measured.
a	=	Monitoring well sampled on an annual basis.
b	=	Laboratory analytical chromatogram pattern: unidentified hydrocarbons C9-C24.
C	=	Well inaccessible.
ď	=	Previous consultant's data deemed suspect by ERI.
e	=	Diesel-range hydrocarbons detected in bailer blank; result is suspect.
f	=	Analyzed using EPA Method 8260B.
9	=	Artesian well.
þ	=	Estimated value between Method Detection Limit and Practical Quantitation Limit.
į	=	Diesel-range hydrocarbons detected; however, laboratory indicates that
		chromatogram pattern does not resemble diesel fuel.
j	=	TOC elevation not measured according to AB 2886. Groundwater elevation not used in
		calculated groundwater flow direction and hydraulic gradient.
k	=	Diesel-range hydrocarbons laboratory control data values outside laboratory historical or
		method prescribed QC limits.
1	=	Surrogate out of range.
m	=	DRO extraction outside holding time.
n	=	Not sampled due to breakage.
0	=	DRO extraction sampled temperature above acceptable range.
р	=	No groundwater recharge after purging.
q	=	No groundwater recharge after purging.
ſ	=	Sampling date on Chain-of-Custody inadvertantly listed as 09/16/04.
		The correct sampling date is 09/15/04.
s	=	Groundwater elevation data invalidated; analytical results suspect.
		and and an an analysis of teaths and pour

# TABLE 2A CUMULATIVE SOIL SAMPLING DATA Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rose, Californis (Pege 1 of 2)

) elqma	D Sample Date	Sample Depth (bgs) <feet></feet>	TPH	Motor Oil	ТРН	TPHg	MTBE	В	T -mg/Kg	Ē	×	Total 8TT
MW-1		4	13	_	_	_	_				<u> </u>	
		9	ND	_	_	_	_	_	_	_	_	ND ND
MW-2		۵	LIP.							_	_	ND
		9 19	ND	_	-	_	-	_	-	_	_	ND
		19	ND	_	_		_	_		_	_	ND
KW-3		4	1000	_	_							
		9	ND	_	_	_	_	-		_	_	82
						_	_	_	_	_	_	ND
MW-4		4	ND	_	_	_	_	_	_	_		
		9	ND	_	_	_	_	_	_	_	_	ND
MW-5											-	ND
		<b>4</b> 9	ND ND	_	_	_	-	-	~	_	_	ND
		3	ND	-	-	_	-	_	_	_	_	ND
MW-6		4	27	_	~							
		9	500	_	_	-	_	_	_	_		ND
		14	ND	_	_	_	_	_	_	_	-	ND
							_	-	_	_	_	ND
MW-7		9	ND	_	_	_	_	_	_	_		
		14	ND	-	-	_	_	_	_	_	_	ND ND
MW-8		4	_								_	ND
		4 9	7 ND	-	_		_	_	_	_		ND
		<b>.</b>	ND		_	_	-	_	-	_	_	ND
MW-9		9	ND	_								
		14	ND	_	_	_	_	_	_	_	-	ND
			-			_	_	_	_	_	_	ND
W-10		4	ND	_	_		_	_		_		
		9	ND	_	_	_	_	_	_	_	-	ND
W-11		•								_	_	ND
100-11		9	ND	_	_	-	_	_	_	_	-	ND
fW-12		4	ND									,
		7	NO	_	_	_	_	-		_	_	ND
W-13		2	ND									
		4	ND	_	_	_	_	-	_	_	_	ND
		5.5	ND	_	_	_	_	_	_	_	_	ND
		7	ND	_	_	_	_	_	_	_	-	ND
		8	ND	_	_	_	_	_	_	_	<del>-</del>	ND
		10 11.5	ND ND	_	-	_	_	_	_	_	=	ND ND
		12	ND	_	_	_	_	_	_	-	_	ND
		14.5	ND		_	_	_	_	_	_	_	ND
		15 18	ND	-	_	~	_		_	_	_	ND ND
		10	ND	_	_	~	_	_	_	_		ND
W-14		3	ND	_		_	_					
		4.5	ND	~	_	_	_	_	_	_	_	ND
		8.5 11	ND	-	_	_	_	-	_	=	_	ND ND
		14.5	ND ND	_	_		_	_	_	_	_	ND
		·		_	_	~	_	_	_	_	_	ND
IP1	12/5/1990	3	_	-	_	1.4	_	<0.005	<0.005	<0.005	0.040	
TP2	12/5/1990	3							-0.000	90.003	0.013	_
		J	_	_	-	<1.0	_	0.024	<0.005	<0.005	0.085	
PL1	12/5/1990	3	-	_	_	<1.0		<0.005	en nos	-A		
PLZ	13/5/4000	•						·-U.VU3	<0.005	<0.005	<0.005	_
~	12/5/1990	3	_	_	<10	1.7	-	<0.005	<0.005	<0.005	0.006	_
L3	12/5/1990	3	_	_		<b>~1</b> 0					7.500	_
				_	~	<1.0	-	<0.005	<0.005	<0.005	<0.005	
PL4	12/5/1990	3	_	_	_	100	_	<0.005	0.3	0.15	0.067	
L5	12/5/1990	3								J. 13	0.067	_
		3	_	-	3300	1300	-	9.3	100	31	150	_
F6	12/5/1990	3	_	_	_	4.9	_	0.019	0.000			
<del>-</del> 915	elolanen	-					•	0.013	0.022	0.020	0.17	-
- DIJ	6/8/2000	5	_	-	<2	<1	-	0.0033	0.0018	0.004	0.0147	
HB17	6/9/2000	3	_	_	-	~1						_
		=	-	_	⋖	<1	_	<0.001	0.0012	0.0079	0.051	_
34 <del>-</del>	40000000	-										
P1-7	10/22/2001	7	-	_	<5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
2-10	10/22/2001	10	_		-6.0					0030	~0.0030	-
2-15	10/22/2001	15	_		<5.0 <5.0		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	_
				_	٠.٠	-1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	_
3-5	10/23/2001	5	_	-	<5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<b>₹</b> 0.00€0	
	10/23/2001	5							2.0000	-0.0030	<0.0050	_
4-5		J	_	_	<5.0	<1.0	<0.0050	0.013/0.004-	40 0000			
94-5 94-20	10/24/2001	20	_		<5.0		<0.0050	0.013/0.061a <0.0050/0.0068a	<0.0050 <0.0050	<0.0050	<0.0050	-

# TABLE 2A CUMULATIVE SOIL SAMPLING DATA Former Excen Service Station 7-0276

1400 Farmers Lane						
ianta Rose, California						
(Page 2 of 2)						
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Sample IQ	Sample Date	Sample Depth (bgs)	TPH	Motor Oll	TPHd	TPHg	MTBE	В	Τ	€	x	Total BTEX
				<u>-</u> -				<del></del>	-mg/Kg			——→
GP5-4	10/23/2001	4										
GP5-41	10/23/2001	4	_	_	120b	1,400	<0.0050	4,4/1,0ae	27/2.2ae	17/2.6ae	84/9.1se	
GP5-5	10/23/2001		_	_	_	_	<5.0	10a	56a	32a	176a	_
GP5-5f	10/23/2001	5 5	_	<10	61¢	350	<0.0050	0.57/1.1ae	4.5/2.0ae	3,8/1,9ae	21/6.5ae	_
0.00	10/23/2001	a	_	_	_	_	<5.0	<5.0a	26a	20a	104a	_
GP6-5	10/23/2001	_									1040	_
GP6-5/	10/23/2001	5	_	_	<5.0	<1.0	< 0.0050	0.005/0.22ee	<0.0050/0.056ae	0.0066/0.18ee	0.013/0.0366ee	
0.00	10/23/2001	5	_	_	_	~	< 0.0050	0.169	0.037a	0.16a	0.25a	_
GP7-1	10/24/2001									•	0.4.30	_
GP7-13	10/24/2001	1	_	55	7.5d	<1.0	<0.0050	< 0.0050	<0.0050	< 0.0050	< 0.0050	
OF7-13	10/24/2001	13	_	-	<5.0	<1.0	0.236/0.24	< 0.0050	< 0.0050	<0.0050	<0.0050	~
GP8-1	40/05/0004									-0.0000	40.0050	_
GP8-10	10/25/2001	1	_	_	<5.0	<1.0	0.38e/0.37	< 0.0050	< 0.0050	< 0.0050	<0.0050	
GP8-15	10/25/2001	10	_	_	<5.0	<1.0	0.30e/0,36	< 0.0050	<0.0050	<0.0050	<0.0050	_
GP8-20		15	_	_	<5.0	<1.0	0.54e/0.70	< 0.0050	<0.0050	<0.0050	<0.0050	-
GF 0-20	10/25/2001	20	-	_	<5.0	<1.0	< 0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	-
Notes:							_			-0.0000	~0.0000	_
mg/Kg	=	Milligrams per kliogram.										
TPH	=	Total petroleum hydrocarb										
Motor Oil		Motor oil enalyzed using E										
TPHd	=	Total petroleum hydrocarb	. William Alexandr	15M,								
TPHg	=	Total natroleum hydrocarb	COLO ED GERMO E	inaiyzad using El	PA Method	1 8015M.						
MTBE	=	Total petroleum hydrocarb MTBE analyzed using EPA	viio ee gesciin	e enaryzed using	EPA Mel	10d 8015A	А.					
olal BTEX	=	Benzene Inluene athirthe	n would ozog	a. 		<b></b>						
<	=	Benzene, toluene, ethylbe Less than the stated labor	rizorie, anu mu	и хуюпеа впагух	ed using E	PA Metho	d 8020.					
ND	=	Not detected at or above is	-baseless -	ebound limit								
_	=	Not sampled.	врогатот А це врог	ang amit.								
bgs		Below ground surface.										
- <i>0-</i> 8		BTEX analyzed using EPA	15-11-1-0000									
ь	=	Detected marries for Discort	Metrod 8260E	1.								
c	=	Detected results for Diesel Detected results for Diesel	i Kange Organi	ca, nowever Lab	oratory ind	icates tha	t chromatogra	n patterna do not	leseib a eldmeser	pattern.		
ď											em most doselv rese	mbles assolina
_	_	Detected results for Diesel that of a heavier hydrocart	range Organi	ca, nowever Lab	onetory ind	icates the	t chromatograd	n patlema do not	resemble e diesel	pattern. The patt	em most dosely res	amplee geschile
										рас		VI-10/05
e	=	The concentration indicate	أحديثه المام									

#### TABLE 2B

# ADDITIONAL CUMULATIVE SOIL SAMPLING DATA Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 1 of 1)

Sample ID	Sample Date	Sample Depth Feet bgs	TAME	ETBE	DIPE	TEIA	1,2-DCA	EDB	Bromomethane	2-Butanone	-	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trichlorobenzene	isopropyl- bezene	n-Propylbezene >	Acetone
GP1-7	10/22/2001	7	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP2-10	10/22/2001	10	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP2-15	10/22/2001	15	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP3-5	10/23/2001	5	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP4-5	10/23/2001	5	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	< 0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP4-20	10/24/2001	20	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	0.0054	<0.010	0.015	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP5-4	10/23/2001	4	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	0.0055	<0.010	1.1a	3.2a	1.8a	<0.0050	0.65a	1.1a	4.0a
GP5-4b	10/23/2001	4	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<10	13	83	26	<5.0	<5.0	12	<50
GP5-5	10/23/2001	5	< 0.0050	< 0.0050	< 0.0050	<0.10	< 0.0050	< 0.0050	0.0056	<0.010	1.5a	1.7a	1.0a	<0.0050	0.30a	0.62a	<0.050
GP5-56	10/23/2001	5	<5.0	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<10	8.3	49	15	<5.0	<5.0	7.3	<50
GP6-5	10/23/2001	5	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	0.018	0.13	0.19	0.015	<0.0050	0.011	0.025	0.054
GP6-5b	10/23/2001	5	<0.0050	<0.0050	<0.0050	<0.10	< 0.0050	<0.0050	0.0053	0.015	0.052	0.14	0.0090	<0.0050	0.010	0.021	<0.050
GP7-1	10/24/2001	1	<0.0050	<0.0050	<0.0050	<0.10	< 0.0050	<0.0050	<0.0050	0.019	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.13
GP7-13	10/24/2001	13	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP8-1	10/25/2001	1	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP8-10	10/25/2001	10	< 0.0050	< 0.0050	< 0.0050	<0.10	< 0.0050	< 0.0050	<0.0050	<0.010	<0.0050	< 0.0050	<0.0050	<0.0050	<0.0050	< 0.0050	<0.050
GP8-15	10/25/2001	15	< 0.0050	< 0.0050	< 0.0050	<0.10	< 0.0050	< 0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
GP8-20	10/25/2001	20	< 0.0050	<0.0050	< 0.0050	<0.10	< 0.0050	< 0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050

Notes
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mg/Kg	=	Milligrams per kilogram,
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 82608.
DIPE	=	Di-Isopropyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzad using EPA Method 8260B.
1,2-DCA	=	1,2-Dichloroethene analyzed using EPA Method 8260B.
EOB	-	Ethylene dibrimide analyzed using EPA Method 8260B.
Bromomethane	=	Bromomethane analyzed using EPA Method 8260B.
2-Butanone	=	2-Butanone analyzed using EPA Method 6260B.
Nepthalene	=	Napthalene enalyzed using EPA Method 8260B.
1,2,4-Trimethylbenzene	=	1,2,4-Trimethylbenzene analyzed using EPA Method 8260B.
1,3,5-Trimethylbenzene	=	1,3,5-Trimethylbenzene analyzed using EPA Method 82608.
1,2,4-Trichlorobenzene	=	1,2,4-Trichkorobenzene analyzed using EPA Method 8260B.
Isopropylbezene	=	isopropylbezene analyzed using EPA Method 8260B.
n-Propylbezene	=	n-Propylbezene enalyzed using EPA Method 8260B.
Acetone	=	Acetone analyzed using EPA Method 82609.
<	=	Less then the stated laboratory method reporting limit.
_	=	Not sampled.
bgs	=	Below ground surface,
Ä	=	The concentration indicated for this analyte is an estimated value

The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
 Sample was re-run as MLS for over range compounds past holding time.

# TABLE 3 COMPARISON OF REPRESENTATIVE CONCENTRATIONS TO GROUNDWATER CLEANUP OBJECTIVES

Former Exxon Service Statlon 7-0276 1400 Farmers Lane Santa Rosa, California (Page 1 of 1)

coc	Representative Concentration	Current Concentration	Cleanup Objective	Primary MCI
<del></del>	<		.ug/L	>
TPHa	11400		-	-
TPHd	1140	9120	_	_
В	918	1110	-	_
Ť	-	705	1	1
Ė	292	286	_	150
X	1010	521	680	300
MTBE	1100	709	1750	1750
MIRE	256	43.2	_	13
Notes:	=	Maximum concentration d	etected in groundwater	
Representative Concentration  Current Concentration	=	Maximum concentration d during the last four monito Maximum concentration d	ring and sampling events	
Cleanup Objective	=	monitoring and sampling e Water quality objectives for	event.	
Primary MCL	=	of the Regional Water Qua California Primary MCL.	ality Control Board Basin F	Plan.
ug/L	=	Micrograms per liter.		
TPHd	=	Total petroleum hydrocarb	ons as diesel.	
TPHg	=	Total petroleum hydrocarb	ons as gasoline	
BTEX	=	Benzene, toluene, ethylber	DZONE, and total sylence	
		,, 501)1201	wire total AMC1182.	
MTBE	=	Methyl tertiary butyl ether.		

#### TABLE 4 SUMMARY OF MASS CALCULATION OF DISSOLVED COCs

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 1 of 1)

COC	Approximate Plume Area (ft^2)	Estimated Volume of Impacted	COC Mass			
<del></del>	(11.2)	Groundwater (ft^3)	mg	lbs		
On-Site						
TPHd	377,991	43,200	1,912,163	4.22		
TPHg	215,679	24,650	2,357,839	5.2		
MTBE	188,991	21,600	190,303	0.42		
Benzene	102,366	11,700	47,421	0.1		
Off-Site						
TPHd	33,800	3,600	873,826	1.9		
TPHg	44,825	3,600	8,115,376	17.9		
MTBE	0	3,600	7,207	0.02		
3enzene	0	3,600	627,339	1.4		

Notes:

COC = Chemical of Concern.

TPHd = Total petroleum hydrocarbons as diesel.
TPHg = Total petroleum hydrocarbons as gasoline.
MTBE = Methyl tertiary butyl ether.
mg = Micrograms.

mg = Micrograms.
lbs = Pounds.

#### TABLE 5 NATURAL ATTENUDATION SAMPLING DATA Former Exxon Service Station 7-0276 1400 Farmont Lene Senta Rosa, California (Pege 1 of 1)

					Physic	al Parametera				Nut	riente		_		Electron	Acceptore		1	Ву-Рго	ducte	
Woll ID#	Semple Location in Relation to Area of Dissolved Hydrocarbon and MTBE Impact	Sampling	DTW E	v. Tampered	Hq on	Conductivity	ORP	TOS	Ammonia- Nitrogen	Ortho- phosphato	Total Nitrogen	Total Phosphate	TKN	Dissolved Oxygen	Nitrato es NO3	N/trito as N	Sulfete	Certoon Dioxide	Forrous Iron	Salfide	Mother
(тос)		Deto		degrees	F pH units	mioroelemene	millivota	pg/L	<u> </u>						yl.—						<pg l-<="" th=""></pg>
MW1	ineldo - Crosegradioni			21.6	486	7.14	60.9		_	_	_	_	_	1.24	_	_		125	0,92		_
MW2	Outsido - Crossagrazdiont	12/15/04		19,4	480	9.34	63,7	440	<0.26	0,17	1.1	0,36	<0.60	1,31	3.3	1.1	25	123	0.05	<1,0	<0.001
MW3	inside - Center	12/15/04		16.2	512	7,23	-59.9	400	<0,25	0.12	1.2	0.35	0.76	0.85	<0.50	0.42	4.7	118	3.3	<1.0	2,8
MW4	Outside - Upgradieni	12/15/04		21.3	403	9.16	183.6	330	<0.2δ	0.28	1.6	0.32	<0.60	1.12	6.2	1.8	24	70	0.51	<1.0	<0.0010
MW5	Ineldo - Contor	12/15/04		15,8	499	7.26	-45,9	380	<0.25	0,12	<1.0	0,30	<0.50	2.3	<0,60	0.34	1.6	175	1.63	1,9	1,6
MMe	Outside Upgradion	12/15/04		19,5	632	6.95	67,4	-	-	-	_	-	-	_	***	_	-	110	0.19	_	_
MW7	Outside - Upgradient	12/16/04		20.8	606	7,06	170	-	-		_	-		1,06	-	_	_	116	0	_	_
MW8	freide - Crossgradion	12/15/04		21.7	488	8,97	45	710	<0.25	0.31	1,1	0.35	<0.50	38	3.0	1,1	17	140	0.12	<1.0	<0.0010
MW9	Outside - Crossgradient	12/16/04		21,1	491	6,83	173,9	-	_	_	_	_	-	1.45	-	_		165	0	_	_
MW10	imide - Contor	12/15/04		18,7	504	8.68	54,8	480	<0.25	029	<1,0	0.32	<0,50	2.46	<0.50	0,3	19	147	2.94	<1,0	0.97
MW12	Quisido - Crossgradioni	12/15/04		18.4	366	9,84	60.4	310	<0.26	0.11	<1,0	0.15	<0.60	1.63	2.1	0.82	19	80	o	<1,0	<0.0010
MW13	Outside - Downgredient	12/16/04		21.5	278	7.23	125,2	-	_	_	-	_	-	2.88	_	_	~	60	0.13	_	_
MW14	Outside - Crossgradient	12/16/04		21	490	8,97	149,2	370	<0.25	0.7	1.1	0.26	<0,50	1.47	2.8	1.1	3.3	115	0.3	<1,0	<0.0010
VIW16	ineldo - I,eading Edgo	12/16/04		17.4	516	8.65	80,6	380	<0.26	0,14	<1.0	0.87	<0.60	2.16	<0.50	0.37	8.2	145	0,36	<1.0	<0,0010
AWI6	Deoper Sedments Downgradient	12/16/04		16.9	400	7,63	66.8	т.	_	-	_	-	-	_	-	_	_	147	1.27	_	
JW17	Despar Sadimente Crossgradient	12/15/04		19	453	7.46	120.2	-	_	-	-		-	1,87		_	-	85	0	_	_
/W18	Deeper Sediments Downgradient	12/15/04		20	378	8.95	-66	_	_	_	_		_ 1	0.62		_		67	o		



DTW Depth to water.

Elevation of groundwater surface; relative to meen see level,

Nareto as NO3 analyzed using EPA Method 300.0. Nitrato da NO3 Nitrito on N Nitrito as N analyzed using EPA Mothod 300,0 Sulfate Sulfate as SO<sub>4</sub> analyzed using EPA Method 300.0. Ortho-phosphete

Phosphate (Ortho) as P enalyzed using EPA Method 300.0. Nitrogen Nitrogen (Total) enalyzed using EPA Method SM 4500-N. Phosphorous Phosphorous analyzed using EPA Mothod 356,3 TDS Total destivod eolide enalyzed using EPA Method 160.0. Ammonia-Nitrogen Ammonia as N scralyzed uning EPA Method 350.1,

Motheno Methene as CH, analyzed using EPA Method RSK-175 modified.

Sulfide Sulfide as SO<sub>2</sub> enalyzed using EPA Method 376.1. TKN Total Kjeldehl Nitrogen analyzed using EPA Method 351.2.

Centran diagrap Cerbon disside as CO<sub>2</sub> enelyzed in the field using a CO<sub>2</sub> liteston kit. Formus tran (Fe<sup>3</sup>\*) Formus from as Fo enalyzed in the Sold using a Colorimetric analysis kit. 00 Dissolved axygon analyzed in the field using a YSI model 65 DO motor. ORP

Oxidetion/reduction potential analyzed in the field using an Orion 250A ORP mater.

Conductivity Measure of the electrical conductive potential of potassium long in groundwater analyzed in the field using a Hydeo meter,

Measure of the average molecular kinotic energy of a substance analyzed in the field using a Hydeo motor. Temperature ρΗ <

Measure of the amount of hydroniumion in a solution measured in the field using a Hydro mater. Lose then the indicated detection limit shown by the laboratory.

mg/L μg/L Miligrems per litor,

Micrograms por liter. a b Analyzed from eampice collected on 12/4/03.

Not measured or sample due to perked vahicle.

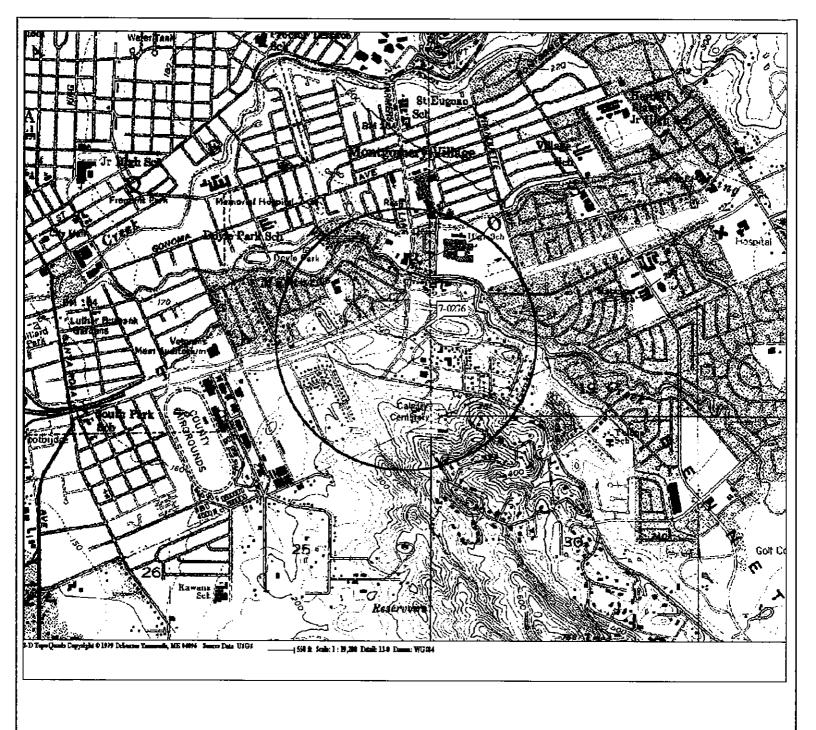
Not analyzed/Not eampled.

#### TABLE 6 SUMMARY OF REMEDIAL ALTERNATIVES

Former Exxon Service Station 7-0276 1400 Farmer's Lane Santa Rosa, California (Page 1 of 1)

				EST	MATED COSTS				
REMEDIAL OPTION	REPORT SECTION	Design and Permit	Equipment and Installation	Operation and Maintenance	Operation and Maintenance	Monitoring	Monitoring	Remedial Option	ESTIMATED DURATION
	<u> </u>			(Per Year)	(Total)	(Per Year)	(Total)	(Total)	
ON SITE	5,3							-	
Soil Vapor Extraction	5.3.1	\$20,000	\$60,000	\$54,000	\$350,000	\$11,000	\$55,000	\$405,000	F.,,,,,,,
Groundwater Extraction/Treatment	5.3.2	\$35,000	\$80,000	\$61,000	\$420,000	\$11,000	\$55,000	\$475,000	5 years
Dual-Phase Extraction	5.3.3	\$35,000	\$140,000	\$84,000	\$511,000	\$11,000	\$44,000	\$555,000	5 years 4 years
Monitored Natural Attenuation	5.3.4	\$0	\$0	\$0	\$0	\$8,250	\$165,000	\$165,000	20 years
OFF SITE	5.4								
Excavation, Natural Attenuation	5.4.1	\$15,000		\$120,000	\$135,000	\$8,250	\$165,000	\$300,000	00
DPE, Natural Attenuation	5.4.2	\$20,000	\$15,000	\$60,000	\$95,000	\$8,250	\$165,000	\$260,000 \$260,000	20 years
Monitored Natural Attenuation	5.4.3	\$0	\$20,000	\$0	\$20,000	\$7,260	\$217,800	\$280,000	20 years 30 years

Monitored Natural Attenuation costs decrease over longer periods due to reductions in monitoring schedule and frequency.



2034Topo

#### **EXPLANATION**



1/2-mile radius circle

#### APPROXIMATE SCALE 0.5 mile SOURCE: Modified from a map provided by DeLorme 3-D TopoQuads

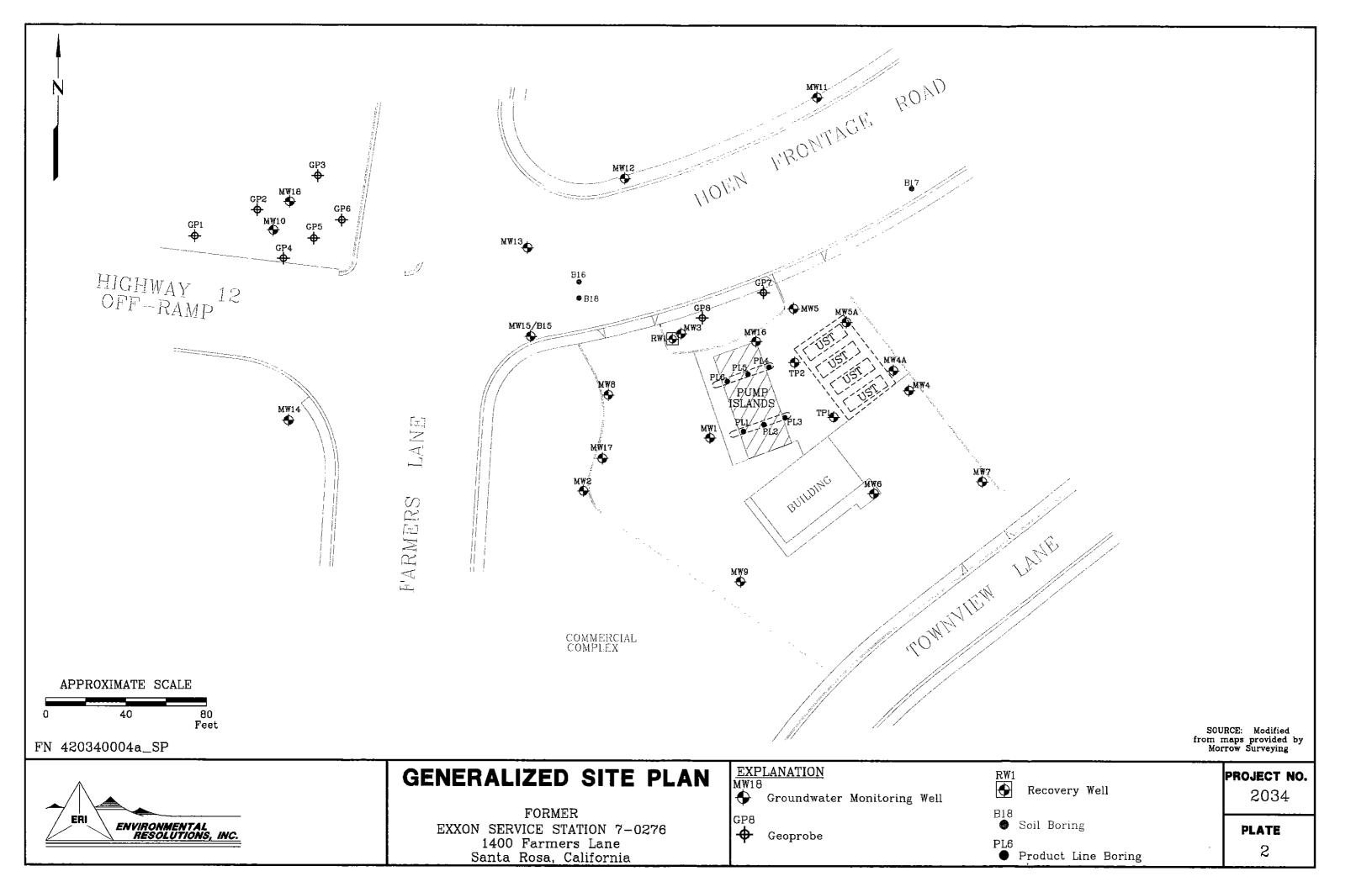


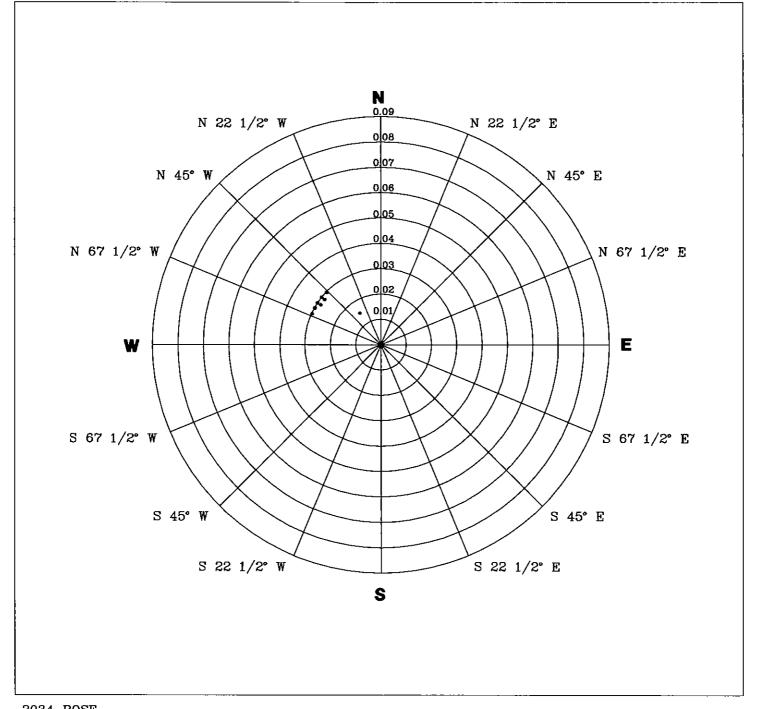
#### SITE VICINITY MAP

FORMER EXXON SERVICE STATION 7-0276 1400 Farmers Lane Santa Rosa, California

PROJECT NO. 2034

PLATE 1





2034 ROSE

#### **EXPLANATION**

N Compass Direction

---- Data Points Shown

Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector.



#### **GROUNDWATER FLOW DIRECTION ROSE DIAGRAM**

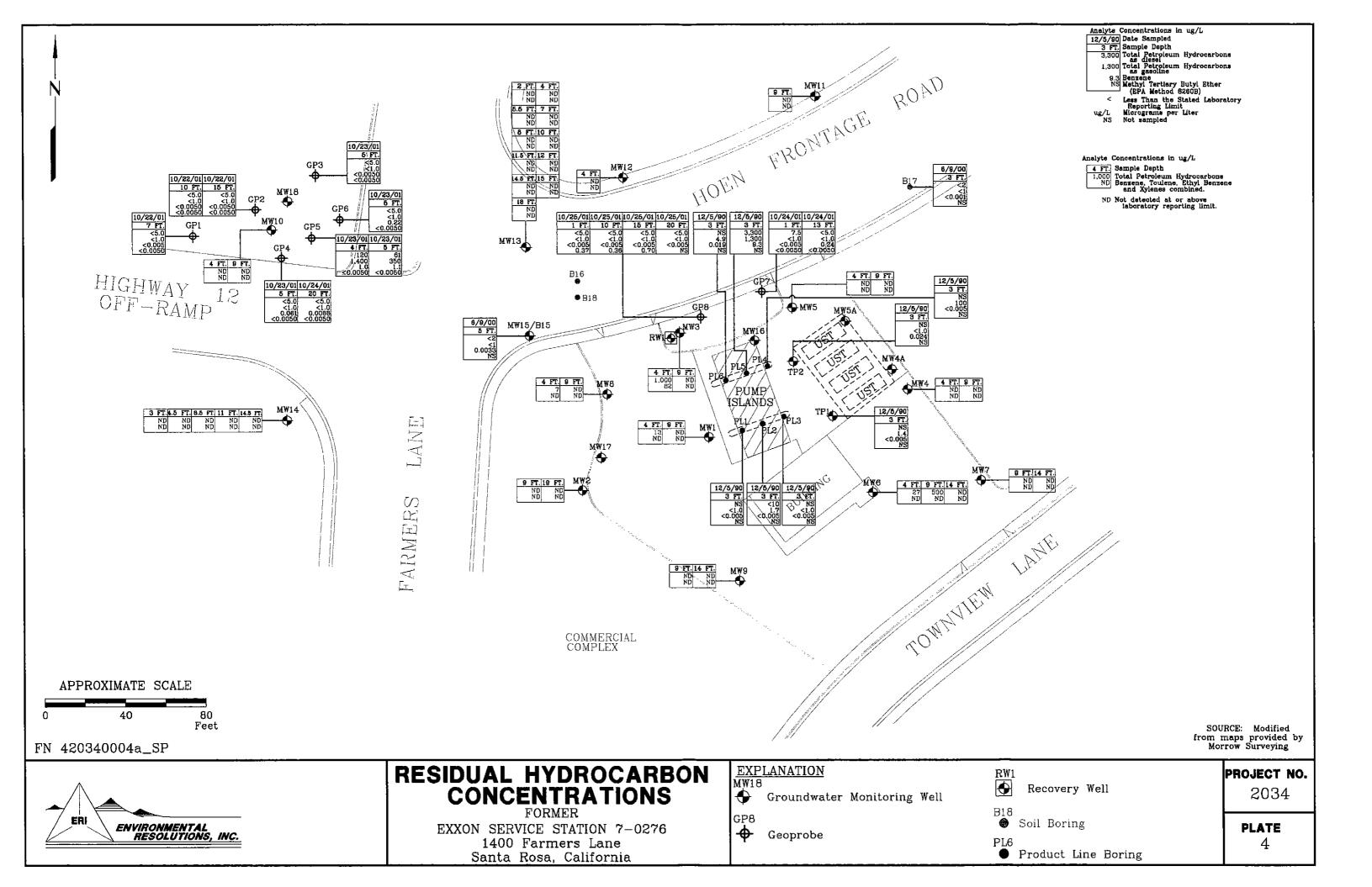
FORMER EXXON SERVICE STATION 7-0276 1400 Farmers Lane Santa Rosa, California

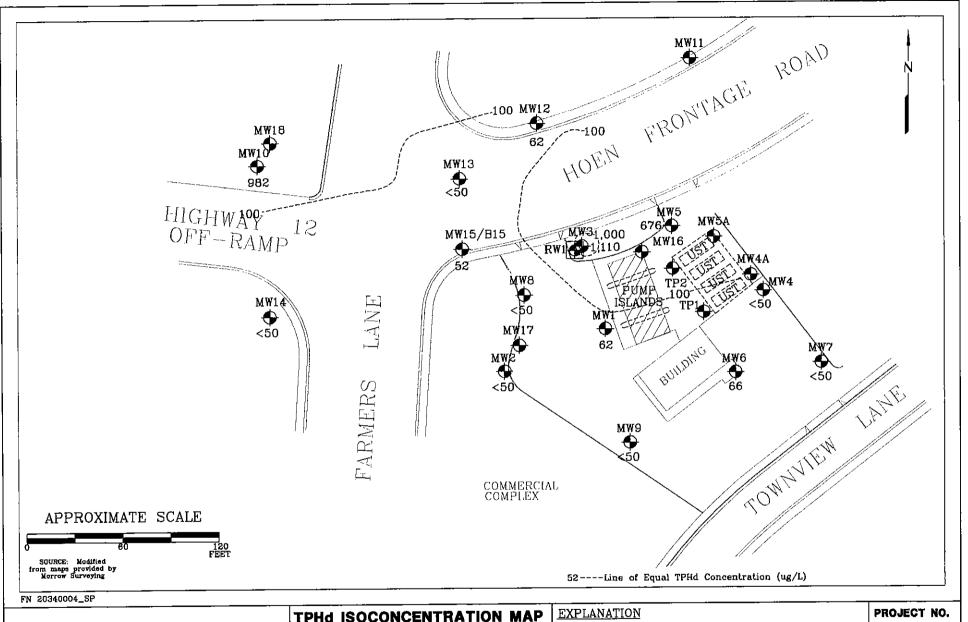
PROJECT NO.

2034

PLATE

3







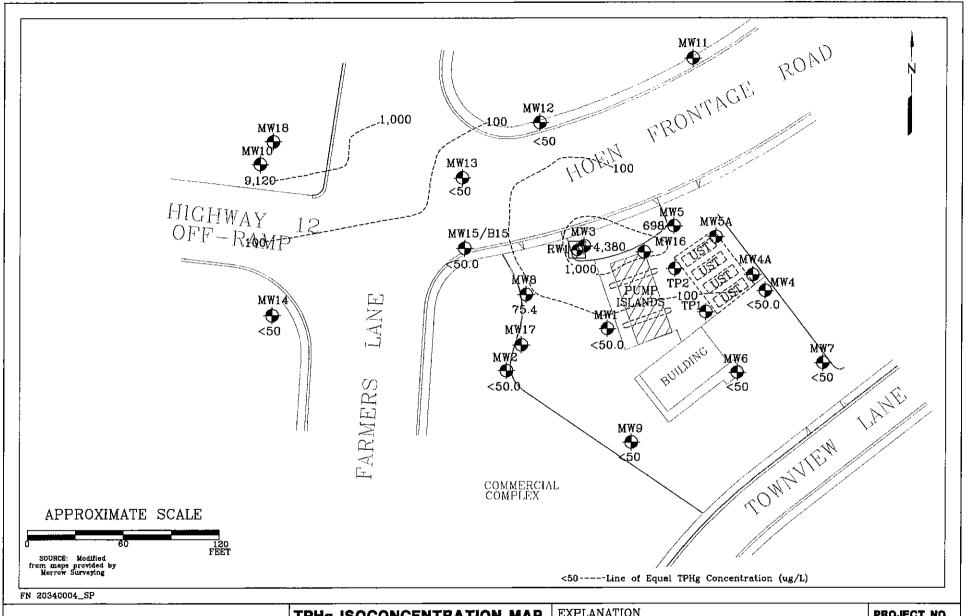
## TPHd ISOCONCENTRATION MAP December 15, 2004

FORMER

EXXON SERVICE STATION 7-0276

1400 Farmers Lane
Santa Rosa, California

EXPL	EXPLANATION							
MW15 ◆ 52	Groundwater Monitoring Well TPHd concentration (ug/L)	2034						
		PLATE						
R₩1	Recovery Well	5						
	Recovery well							



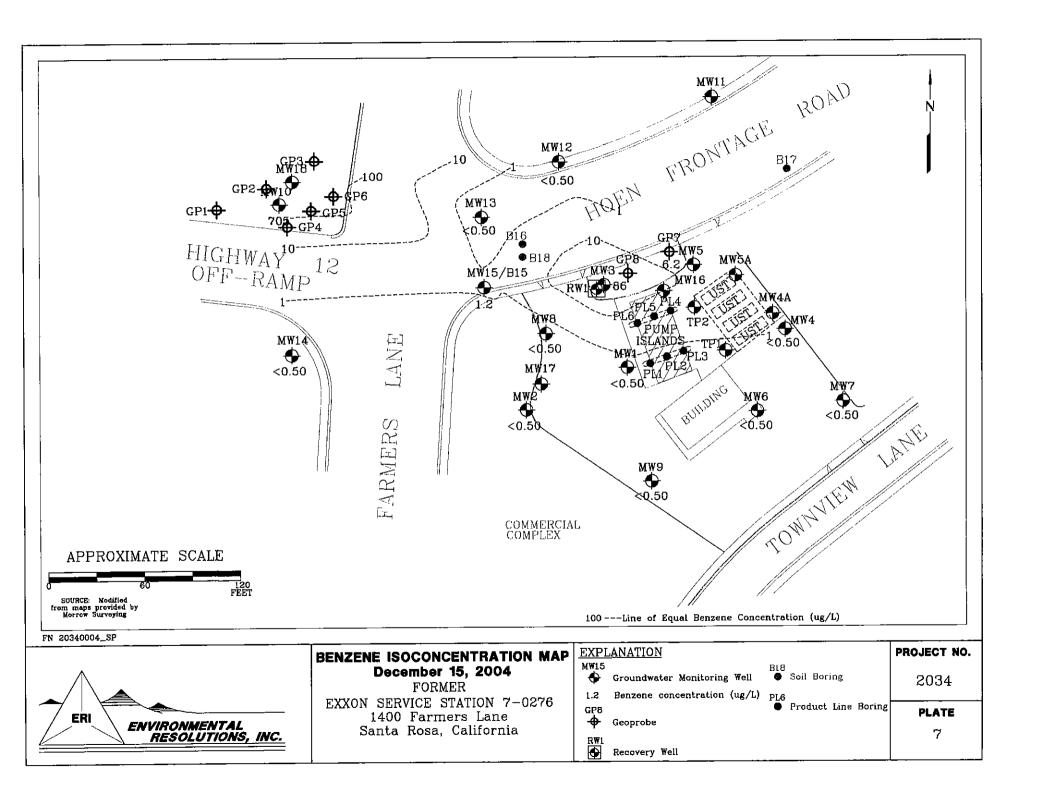


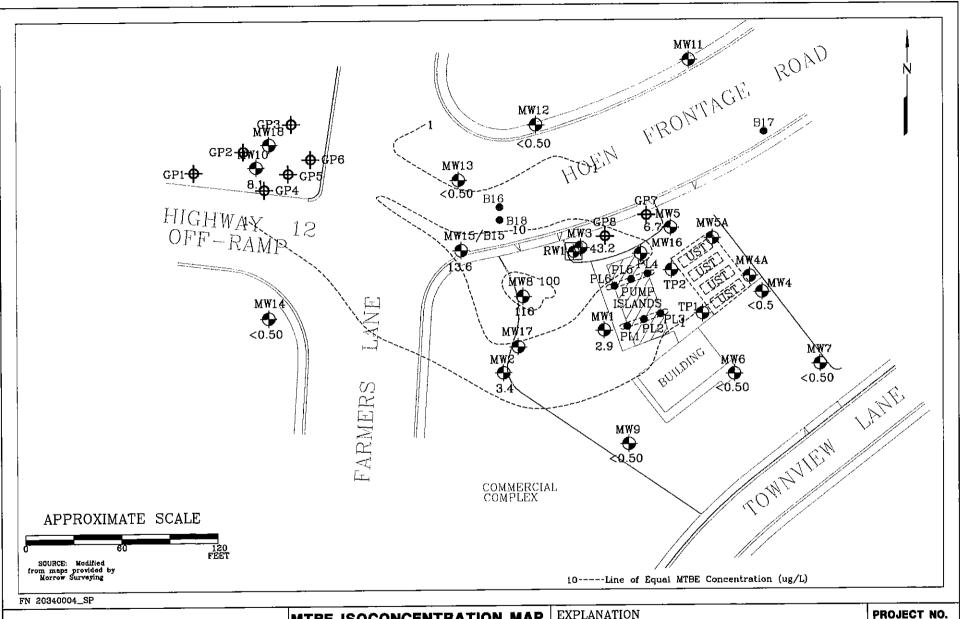
#### TPHg ISOCONCENTRATION MAP December 15, 2004

FORMER

EXXON SERVICE STATION 7-0276 1400 Farmers Lane Santa Rosa, California

EXPLANATION	PROJECT NO.
MW14 Groundwater Monitoring Well <50 TPHg concentration (ug/L)	2034
	PLATE
RW1 Recovery Well	6







## MTBE ISOCONCENTRATION MAP December 15, 2004 FORMER

EXXON SERVICE STATION 7-0276 1400 Farmers Lane Santa Rosa, California

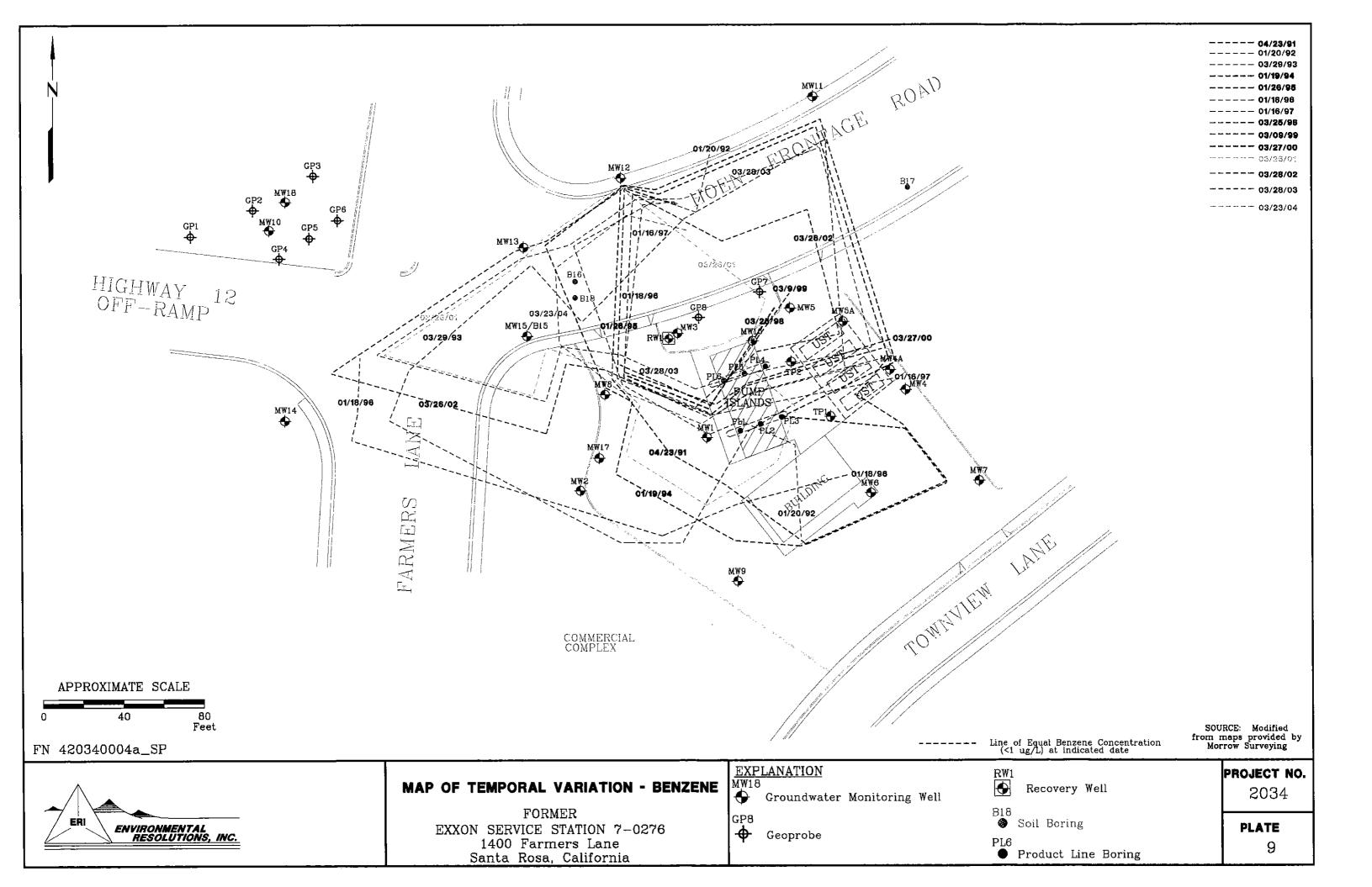
EXPI	<u>ANATION</u>	-
MW15		B18
•	Groundwater Monitoring Well	<ul><li>Soil Boring</li></ul>
13.6	MTBE concentration (ug/L)	PL6
GP8		<ul> <li>Product Line Boring</li> </ul>
<del> </del> →	Geoprobe	
R₩1		

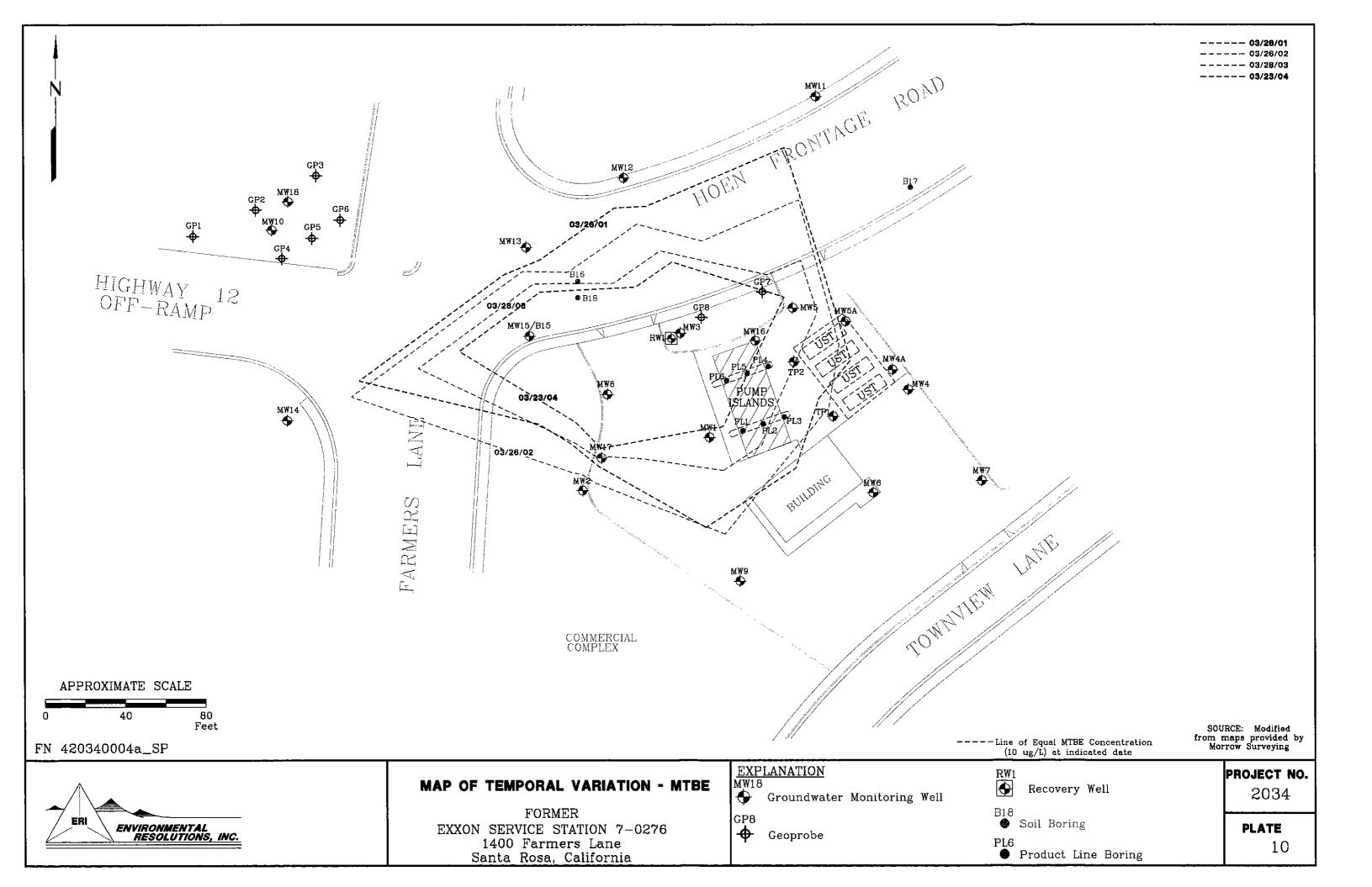
Recovery Well

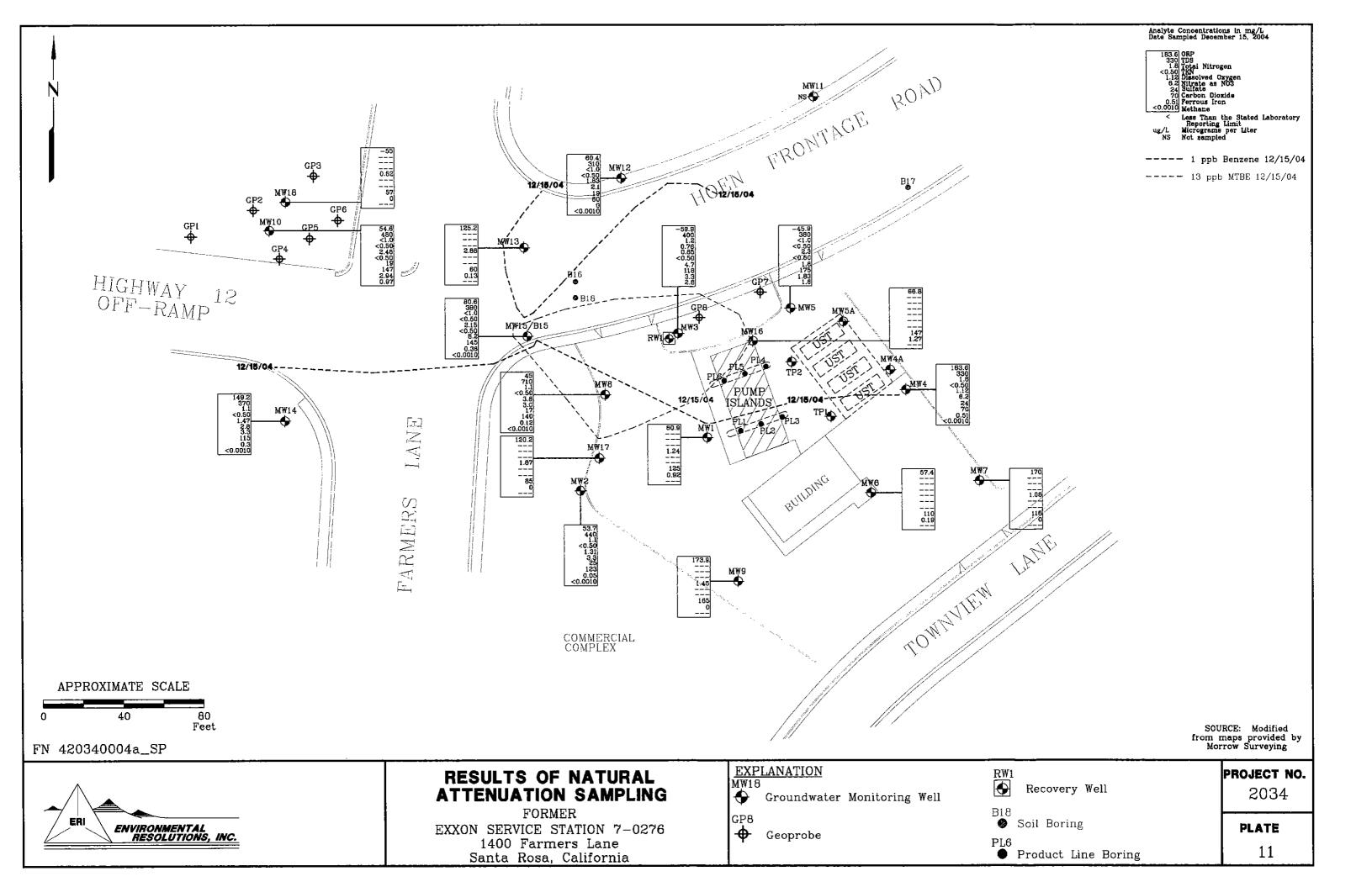
2034

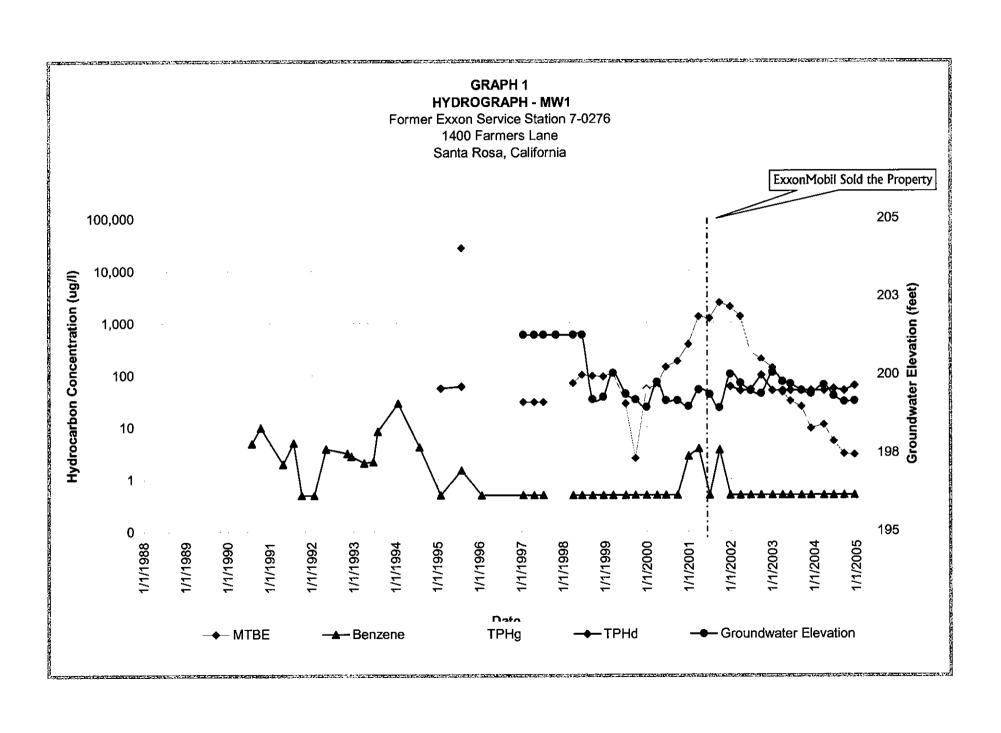
**PLATE** 

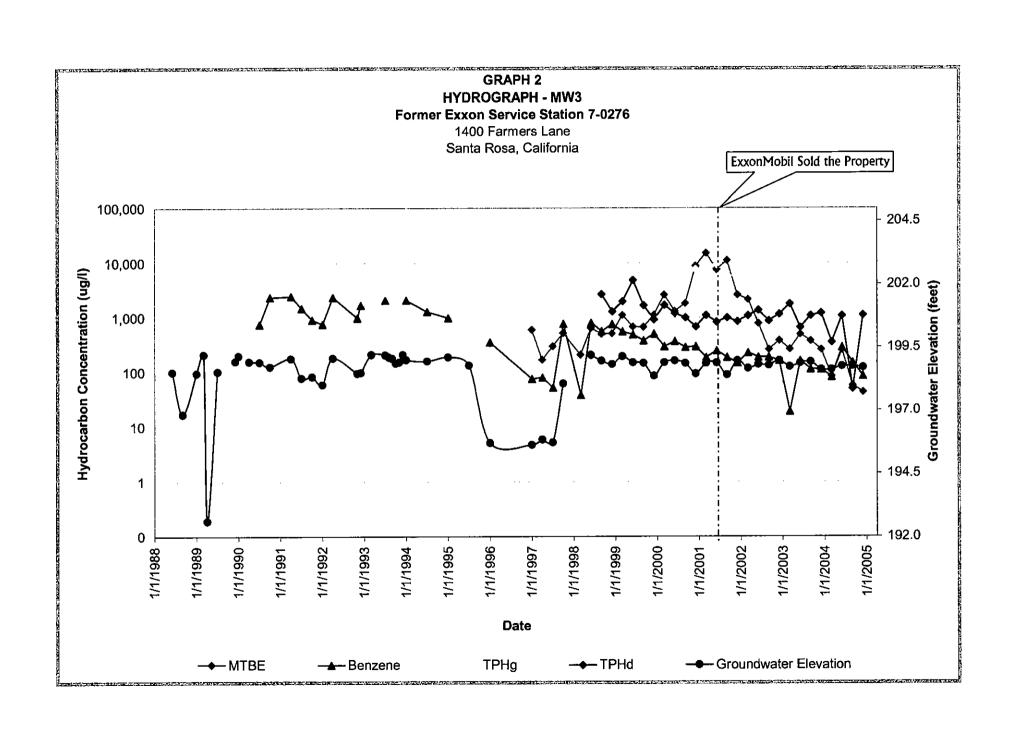
8

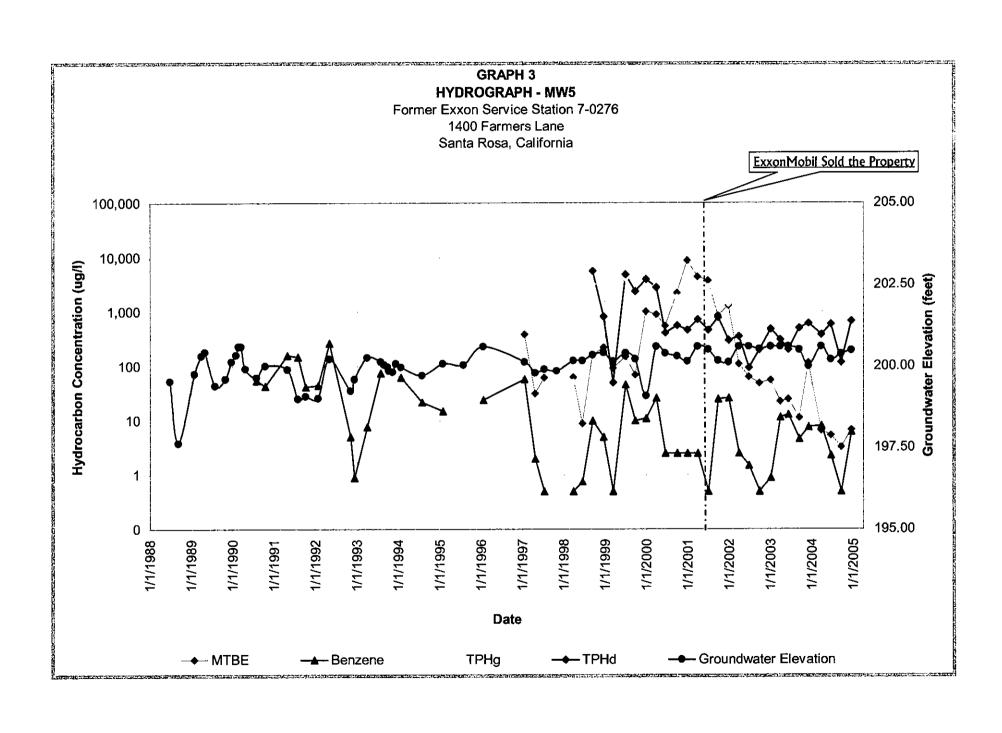


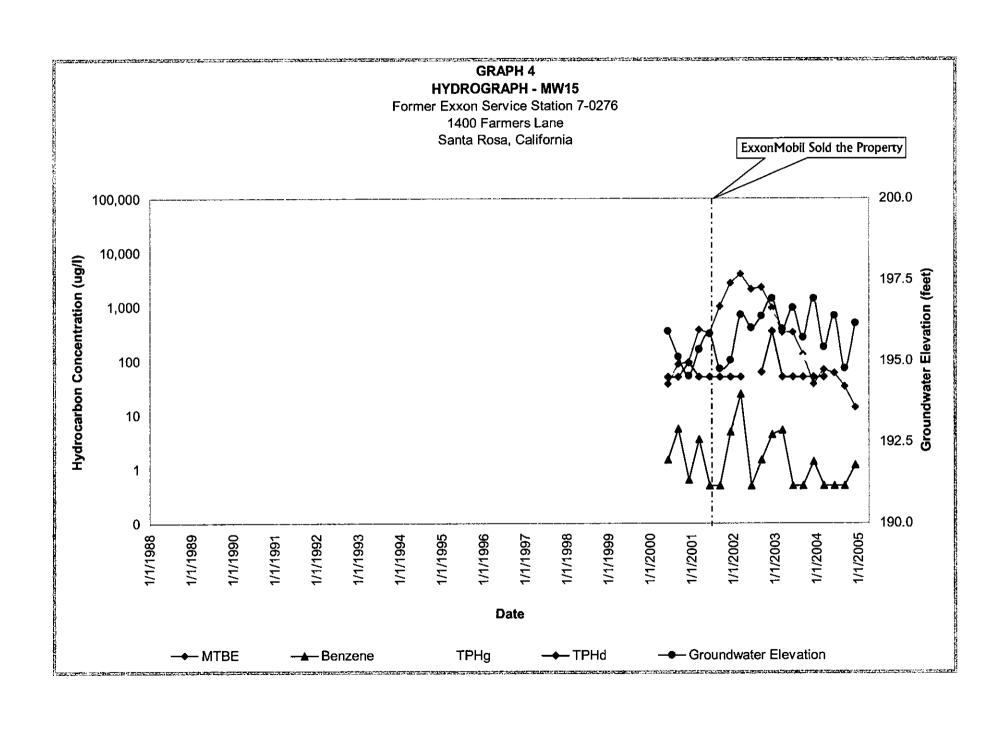


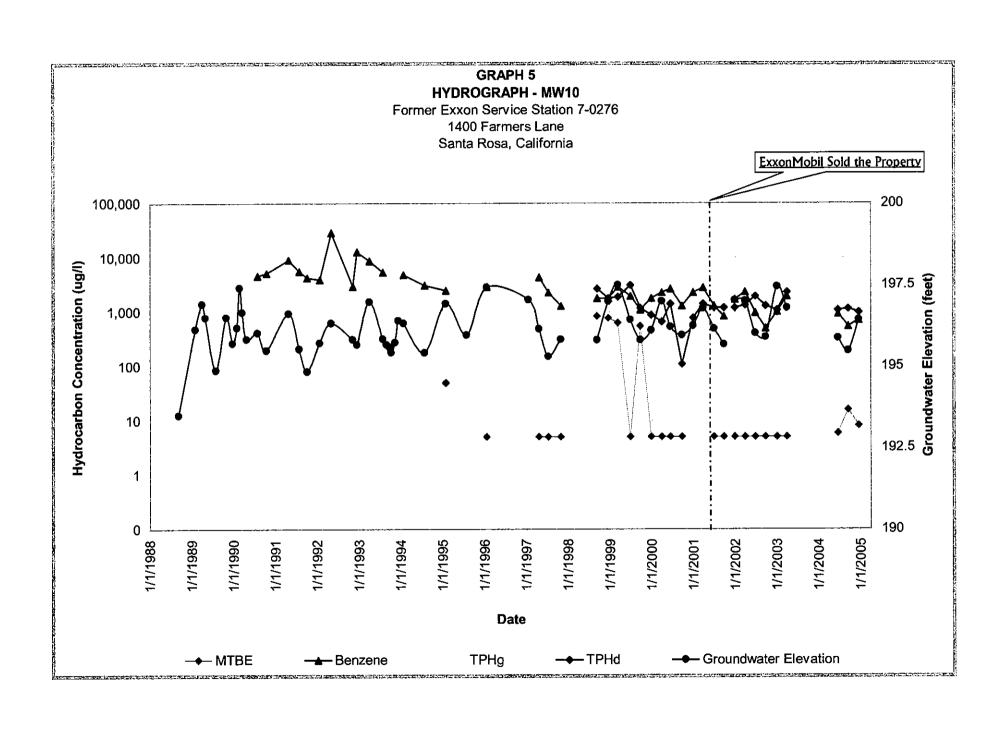












# APPENDIX A REGULATORY CORRESPONDENCE

7-0276



Terry Tamminen
Secretary for
Environmental
Protection

### California Regional Water Quality Control Board North Coast Region

William R. Massey, Chairman

http://www.swrcb.ca.gov/rwqcbl/ 5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403 Phone 1-877-721-9203 Office (707) 576-2220 FAX (707) 523-0135



November 30, 2004

Jennifer C. Sedlachek, Project Manager ExxonMobil Refining and Supply Company 4096 Piedmont Avenue #194 Oakland, California 94611

P	ZC.	$\mathbb{Z}$	$\Gamma$	VI	ار ت ا
14) 25	EC. Dec	0	3	2004	
ь.	W.				

Dear Ms. Sedlachek:

Subject:

Request for Corrective Action Plan

File:

Texaco (Farmers Lane, 1400), 1400 Farmers Lane, Santa Rosa;

Case No. 1TSR069

Regional Water Board staff has reviewed the following documents prepared for the subject site by Environmental Resolutions, Inc. (ERI):

- March 26, 2004 "Supplemental Evaluation of Groundwater"
- May 21, 2004 "High-Vacuum Dual-Phase Extraction Pilot Test"
- October 20, 2004 "Work Plan for a Feasibility Study for Natural Attenuation."

Depth-discrete groundwater samples collected in October 2003 show significant levels of dissolved petroleum compounds as deep as 36 feet below ground surface (bgs). The dual-phase extraction pilot test conducted in October 2003 indicates that dual-phase extraction is a feasible remedial alternative for removing petroleum constituents from soil and groundwater and for controlling contaminant migration.

In October 2002, Regional Water Board staff requested the submittal of a feasibility study and Corrective Action Plan for this site. In April 2003, Regional Water Board staff concurred with the proposals to install additional monitoring wells and to submit a Corrective Action Plan within sixty days of completing the proposed work. However, when staff inquired about the status of the project in August 2004, the proposed installation of monitoring well MW-18 had not been completed. Although monitoring well MW-18 has subsequently been installed, the fieldwork has not yet been documented in the case file. ERI has indicated that a report for the installation of monitoring well MW-18 would be submitted before December 6, 2004.

On October 27, 2004, ERI submitted a "Work Plan for a Feasibility Study for Natural Attenuation," proposing to collect additional groundwater data to evaluate monitored natural attenuation (MNA) during the upcoming seasonal high and low groundwater monitoring events. On November 22, 2004, Regional Water Board staff contacted Robert Saur of ERI to discuss the status of the investigation. As discussed with Mr. Saur on November 22, Regional Water Board staff does not concur with the proposal to wait another year for the collection of water quality

California Environmental Protection Agency

data prior to evaluating MNA as a potentially effective remedial alternative. We note that data for evaluating MNA could have been collected at any time since we requested submittal of the CAP in October 2002.

Implementation of a Corrective Action Plan (CAP) is needed at the subject site to remove continuing sources of contamination, to prevent continuing contaminant migration from the site, and to achieve water quality objectives in groundwater within a reasonable timeframe. Pursuant to the California Underground Storage Tank Regulations<sup>1</sup>, a feasibility study (FS) must be included as part of CAP to identify and evaluate at least two alternatives for restoring or protecting beneficial uses of groundwater. In addition, CAP proposals must have a substantial likelihood to achieve compliance with cleanup goals and objectives within a reasonable time frame when compared to other feasible alternatives.<sup>2</sup> To achieve this objective, the FS must estimate the time needed for each feasible remedial alternative under consideration.

Please submit an FS/CAP to address cleaning up continuing sources of groundwater contamination, controlling contaminant migration in groundwater, and achieving water quality objectives at the site in a reasonable time frame. The FS/CAP must be submitted within sixty days of the date of this letter.

Please contact me at (707) 576-2469 if you have any questions or comments.

Sincerely,

Jim Tischler

**Environmental Scientist** 

JAT:clh\ 113004\_JAT\_Texaco (Farmers)10.let

CC: Santa Rosa Fire Department

Mr. Robert A. Saur, Environmental Resolutions, Inc., 73 Digital Drive, Suite 100, Novato, CA 04049-5791

Mr. John Anderson, Sonoma County Environmental Health Department

<sup>&</sup>lt;sup>1</sup> California Underground Storage Tank Regulations, Title 23, Chapter 16, CCR Section 2725 requires Section 2725 (f)

<sup>&</sup>lt;sup>2</sup> SWRCB Resolution No 92-49: "Policies And Procedures For Investigation And Cleanup and Abatement Of Discharges Under Water Code Section 1330"

# APPENDIX B CHEMICAL PROPERTIES

#### CHEMICAL DATA FOR SELECTED COCs

**Physical Property Data** 

						Diffi	ıslon		la	g (Koc) or					Vapor						
			Molecul	lar		Coeff	clents			log(Kd)		Henry's	Law Constant		Pressur	8	Solubilit	У			
			Weigh	t	in air		in wate	r	(@	20 - 25 C)		(@	20 - 25 C)		(@ 20 - 25	C)	(@ 20 - 25	C)			
	CAS		(g/mole	9)	(cm2/s)		(cm2/s)	)	1	log(L/kg)		(atm-m3)			(mm Hg	)	(mg/L)		acid	base	
Constituent	Number	type	MW	ref	Dair	ref	Dwat	ref		partition	ref	mol	(unitiess)	ref		ref		ref	рКa	pKb	re
Benzene*	71-43-2	A	78.1	P\$	8.80E-02	R2	9.80E-06	R2	1.79	Koc	R2	5.53E-03	2.28E-01	R2	9.52E+01	PS	1.80E+03	R2	-	-	_
Ethylbenzene*	100-41-4	Α	106.2	P\$	7.50E-02	R2	7.80E-06	R2	2.30	Koc	R2	7.83E-03	3.23E-01	R2	1.00E+01	PS	1.69E+02	R2	-	-	-
Methyl t-Butyl ether*	1634-04-4	Α	88.146	5	8.10E-02	R2	9.41E-05	R2	1.07	Koc	R2	5.84E-04	2.41E-02	R2	2.49E+02	_	4.80E+04	R2	-	-	
Toluene*	108-88-3	Α	92.4	5	8.70E-02	R2	8.60E-06	R2	2,15	Koc	R2	6.57E-03	2.71E-01	R2	3.00E+01	4	5.26E+02	R2	-	-	
Xylene (mixed isomers)*	1330-20-7	Α	106.2	5	7.00E-02	R2	7.80E-06	R2	2.30	Koc	R2	7.25E-03	2.99E-01	R2	7.00E+00	4	1.61E+02	R2	-		_
TPH - Aliph >C05-C06	0-00-0	Т	81	T	1.00E-01	T	1.00E-05	Ţ	2.90	Koc	Ť	7.88E-01	3.25E+01	Т	2.66E+02		3.60E+01	Ť			
TPH - Aliph > C06-C08	0-00-0	Τ	100	T	1.00E-01	7	1.00E-05	T	3.60	Koc	_	1.17E+00	4.81E+01	Т	4.79E+01		5.40E+00	т Т		-	
TPH - Aliph >C08-C10	0-00-0	T	130	Т	1.00E-01	T	1.00E-05	Т	4.50	Koc	Т	1.90E+00	7.85E+01	T	4.79E+00	-	4.30E-01	T			
TPH - Allph >C10-C12	0-00-0	Ť	160	Т	1.00E-01	Т	1.00E-05	Т	5.40	Koc	Т	2.96E+00	1.22E+02	Ť	4.79E-01	-	3.40E-02	T	-		
TPH - Aliph >C12-C16	0-00-0	T	200	T	1.00E-01	Т	1.00E-05	Ŧ	6.70	Koc	Т	1.26E+01	5.21E+02	Т	3.65E-02		7.60E-04	T			
TPH - Aliph > C16-C21	0-00-0	Ŧ	270	Т	1.00E-01	Т:	1.00E-05	Ť	8.80	Koc	Т	1.19E+02	4.90E+03	T	8.36E-04	-	2.50E-06	T	_	-	
TPH - Allph >C21-C34	0-00-0	Т	400	-	1.00E-01	-	1.00E-05	- 1	8.80	Koc	-	1.76E+02	7.26E+03	-	8.36E-04	_	2,50E-06	- 1	-		

Site Name: Former Exxon Service Station 7-0276

Site Location: 1400 Farmers Lane, Santa Rosa, CA

Completed By: Date Completed: 0-Jan-00

Job ID:

#### CHEMICAL DATA FOR SELECTED COCs

**Toxicity Data** 

	Reference Dose		Reference Conc. Slope Factors				Unit Risk Fa	actor						
_		(mg/k	g/day)		(mg/m3)		1/(mg/kg/day)				1/(µg/m3)			
			(mg/kg/day)						1/(mg/kg/day)				EPA Weight	ei
	Oral		Dermal		Inhalation		Oral		Dermal		Inhalation		of	Constituent
onstituent	RfD_oral	ref	RfD_dermal_	ref	RfC_inhal	ref	SF_oral	ref	\$F_dermal	ref	URF_Inhal	ref	Evidençe	Carcinogenic ?
lenzene*	3.00E-03	R2	-	-	5.95E-03	R	1.00E-01	R2	2.99E-02	TX	8.29E-06	PS	Α	TRUE
thylbenzene*	1.00E-01	R2	9.70E-02	0.1	1.00E+00	PS	-	-	-	- 1		-	D	FALSE
Nethyl t-Butyl ether*	1.00E-02	R2	8.00E-03	0.01	3.00E+00	В	1.80E-03	R2	-		-	-	Α	TRUE
'oluene*	2.00E-01	R2	1.60E-01	0.16	4.00E-01	•	-	'	- ·			-	D	FALSE
(ylene (mixed isomers)*	2.00E+00	R2	1.84E+00	1.84	7.00E+00	Α			-		-	-	D	FALSE
PH - Aliph > C05-C06	5.00E+00	Т	-	-	1.84E+01	Т	-	-	·			-	D	FALSE
PH - Aliph > C06-C08	5.00E+00	Ţ	-	-	1.84E+01	Т	-	-	-	-	-	-	D	FALSE
PH - Aliph > C08-C10	1.00E-01	Т	-	-	1.00E+00	T	-	-	-	-	-	-	D	FALSE
PH - Aliph >C10-C12	1.00E-01	Т	-	-	1.00E+00	Т	•	-	-	- [	-	-	D	FALSE
PH - Allph >C12-C16	1.00E-01	T	-	-	1.00E+00	Т	-		-	-	-	-	Ď	FALSE
PH - Allph >C16-C21	2.00E+00	Т	-	-	•	Т	-	-	-	-	-	- 1	D	FALSE
PH - Allph >C21-C34	2.00E+00	T		-		Ţ		-	-	-	-	-	D	FALSE

Site Name: Former Exxon Servi Site Location: 1400 Farmers

#### Miscellaneous Chemical Data

			Time-Wei	ighted	Aquatic Li	fe	Biocon-	
	Me	ximum	Average We	orkplace	Prot. Crite	centration		
	Conten	ninant Level	Crite	da		Factor		
Constituent	MCL (mg/L)	ref	TWA (mg/m3)	ref	AQL (mg/L)	ref	(L-wat/kg-fish)	
Benzene*	1.00E-03		3.25E+00	_	4.60E-02	R2	12.6	
Ethylbenzene*	7.00E-01		4.35E+02	-	2.90E-01	R2	1	
Methyl t-Butyl ether*	5.00E-03		6.00E+01	NIOSH	8.00E+00	R2	1	
Toluene*	1.50E-01	-	1.47E+02	ACGIH	1.30E-01	R2	70	
Xylene (mixed isomers)*	1.75E+00	-	4.34E+02	ACGIH	1.30E-02	R2	1	
TPH - Aliph >C05-C06		-		-	-	-	1	
TPH - Aliph >C06-C08	-	-	-	-	-		1	
TPH - Aliph > C08-C10	-	-	-	-	-	-	1	
TPH - Aliph >C10-C12	-	•	-		-	-	1	
TPH - Allph >C12-C16	-	•		-	-	•	1	
TPH - Allph >C16-C21	-	-		_	-	-	1	
TPH - Aliph >C21-C34	-	-	-	-		-	1	
<ul> <li>= Chemical with user-specifical</li> </ul>	ied .						· · · · · ·	

Site Name: Former Exxon Servk Site Location: 1400 Farmers I

#### CHEMICAL DATA FOR SELECTED COCs

Miscellaneous Chemical Data

	Dermal		. Wa	ter Dermai Per	meability Data		_							
	Relative	Dermal	Lag time for	Critical	Relative	Water/Skin			Detection	Limits		Hal	f Life	
	Absorp.	Permeability	Dermal	Exposure	Contr of Denn	Derm Adsorp		Groundwa	ater	Soll			der Decay)	
	Factor	Coeff.	Exposure	Time	Perm Coeff	Factor		(mg/L)	(ma/L)		3)	(days)		
Constituent	(unitless)	(cm/hr)	(hr)	(hr)	(unitiess)	(cm/event)	ref	, ,	ref		ref	Saturated	Unsaturated	ref
Bertzene*	0.5	0.021	0.26	0.63	0.013	7.3E-2	D	0.0005	s	0.5	s	1440	1440	E1
Ethylbenzene*	0.5	0.074	0.39	1.3	0.14	2.7E-1	D	0.0005	s	0.5	s	228	228	H
Methyl t-Butyl ether*	0.5	-		-	-		-	0.0005		0.5	L1	1440	1440	E1
Toluene*	0.5	0.045	0.32	0.77	0.054	1.6E-1	D	0.0005	s	0.5	s	28	28	H
Xylene (mixed isomers)*	0.5	0.08	0.39	1.4	0.16	2.9E-1	D	0.0005	s	0.5	s	360	360	H
TPH - Aliph >C05-C06	0.5	-	-	-	-	-		-					-	<del></del>
TPH - Aliph >C06-C08	0,5	-	_	-		-	- 1		-					
TPH - Allph >C08-C10	0.5	•	-	-	-		- 1		- †				:	
TPH - Aliph >C10-C12	0.5			-		-			-					<del>-</del>
FPH - Aliph >C12-C16	0.5	-	_		-		- 1	-						<del>-</del> -
ГРН - Aliph >C16-C21	0.05	-	-		-		-	·	-				·	— <u>-</u> -
PH - Aliph > C21-C34	0.05	-	-	-	-	-	- 1		-				<del></del>	<u> </u>

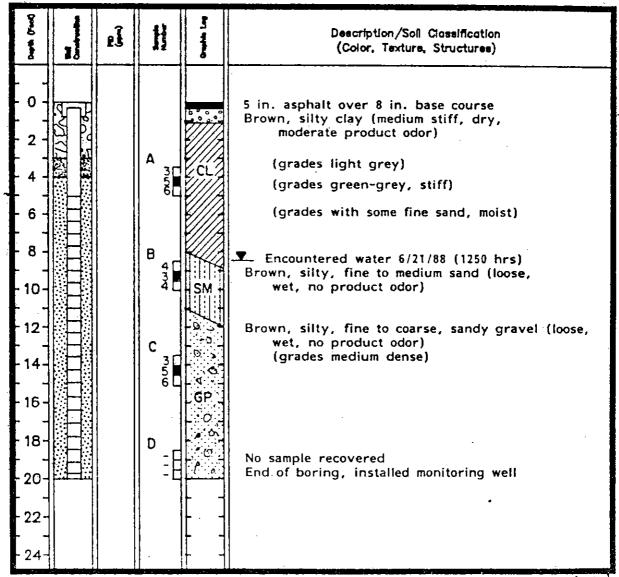
Site Name: Former Exxon Servi-Site Location: 1400 Farmers I

#### RBCA Tool Kit for Chemical Releases, Version 1.3a

Job ID: Commands and Options Site Name: Former Exxon Service Station 7-0276 Date: 0-Jan-00 Location: 1400 Farmers Lane, Santa Rosa, CA **Print Sheet** Return Compl. By: Paste Default Values Help Constituent Laif-Life Values Saturated Zone Unsaturated Zone First-Order Decay First-Order Decay Coeffecient Coeffecient Constituent Half-Life: Half-Life (day) (1/day) (day) (1/day) = (1/day) 4.8E-4 4.8E-4 1.4E+3 1.4E+3 Benzene\* 3.0E-3 2.3E+2 3.0E-3 2.3E+2 Ethylbenzene\* 4.8E-4 1.4E+3 4.8E-4 1.4E+3 Methyl t-Butyl ether\* 2.8E+1 2.5E-2 2.8E+1 2.5E-2 Toluene\* 1.9E-3 3.6E+2 3.6E+2 1.9E-3 Xylene (mixed isomers)\* 9.6E-4 7.2E+2 9.6E-4 7.2E+2 TPH - Aliph >C05-C06 9.6E-4 7.2E+2 9.6E-4 7.2E+2 TPH - Aliph >C06-C08 9.6E-4 7.2E+2 9.6E-4 7.2E+2 TPH - Aliph >C08-C10 7.2E+2 9.6E-4 7.2E+2 9.6E-4 TPH - Aliph >C10-C12 7.2E+2 9.6E-4 7.2E+2 9.6E-4 TPH - Aliph >C12-C16 7.2E+2 9.6E-4 7.2E+2 9.6E-4 TPH - Aliph >C16-C21 9.6E-4 7.2E+2 9.6E-4 7.2E+2 TPH - Aliph >C21-C34

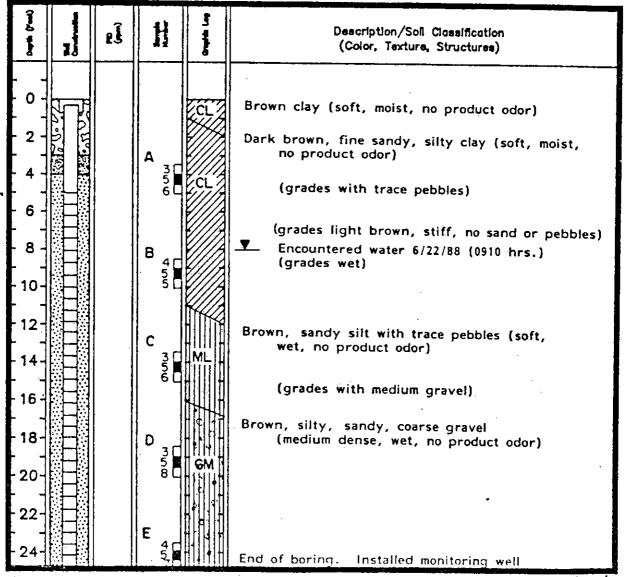
# APPENDIX C BORING LOGS

GROUNDWATER TECHNOLOGY, INC. Monitoring Well	Drilling Log
Project TEXACO/FARMERS Owner Texaco Refining & Marketin	Sketch Map
LocationProject Number_200 150 4525:11	
Date Drilled 6/21/88 Total Depth of Hole 20 ft. Diameter 7.5 in.	
Surface Elevation	'See Site Plan
Screen: Dia. 2 in. length 15 ft. Slot Size 0.020 in.	
Casing: Dia. 2 in. length 5 ft. Type PVC	
Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger	
Ortiler Steve Lambott Log by Chris DeSocio	Notes:
Geologist / EngineerLicense No	



Page\_1\_of\_

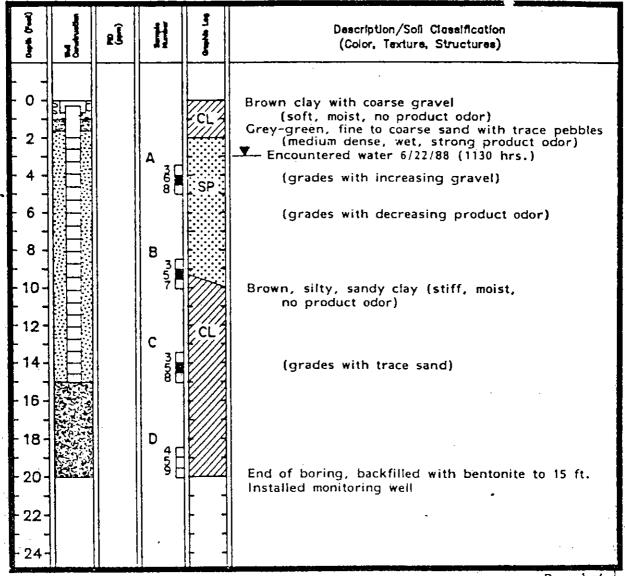
GROUNDWATER TECHNOLOGY, INC. Monitoring Well 2	Drilling Log
Project TEXACO/FARMERS Owner Texaco Refining & Marketin	
Location Santa Rosa, CA Project Number 203 150 4329.11  Date Drilled 6/22/88 Total Depth of Hole 25 ft. Diameter 7.5 in.  Surface Elevation Water Level Initial 8.0 ft. 24 hour  Screen: Dia. 2 in. length 20 ft. Slot Size 020 in.	See Site Plan
Casing: Dia. 2 in. Length 5 ft. Type PVC  Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger  Driller Chris DeSocio Log by Steve Kranyak  Geologist / Engineer Ucense No.	Notes:



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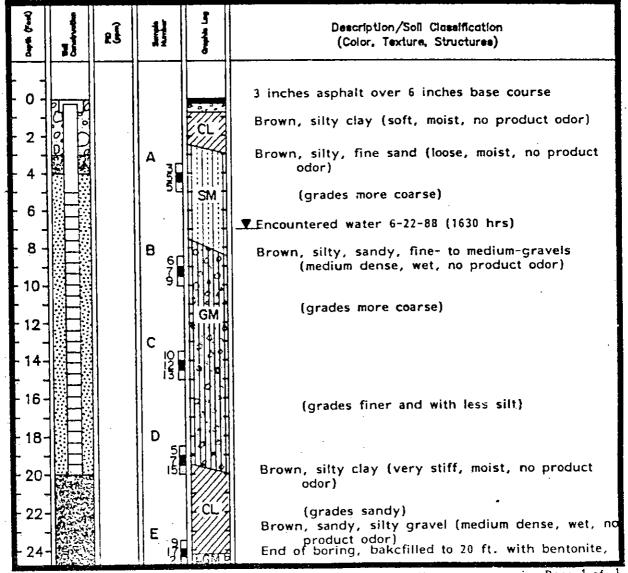
Page\_1\_of\_1\_

GROUNDWATER TECHNOLOGY, INC.	Drilling Loc
Monitoring Well 3	
Project TEXACO/FARMERS Owner Texaco Refining & Marketin	Sketch Map
Location Santa Rosa, CA Project Number 203 150 4329.11	
Date Drilled 6/22/88 Total Depth of Hole 20 ft. Diameter 7.5 in.	. See Site Plan
Surface Elevation Water Level Initial 3 ft. 24-hour	see site Plan
Screen: Dla. 2 in. Length 13 ft. Slot Size 0.020 in.	
Coaing: Dia. 2 in. Length 2 ft. Type PVC	
Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger	Notes;
Orllier Chris DeSocio Log by Steve Kranyak	110,00
Geologist / Engineer License No	4.



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GROUNDWATER TECHNOLOGY, INC. Monitoring Well 4	Drilling Log
Project Texaco/Farmers Owner Texaco Ref. & Mktg. Inc.	Sketch Map
Location Santa Rosa, CA Project Number 203-150-4329.11	·
Date Drilled 6-22-88 Total Depth of Hole 25 ft. Diameter 10.5 in.  Surface Elevation Water Level Initial 7 ft. 24-hour	See Site Plan
Screen: Dia. 4 in. Length 15 feet Slot Size 0.020 in. Casing: Dia. 4 in. Length 5 feet Type PVC	
Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger	
Oriller Steve Lambott Log by Christopher DeSocio	Notes:
Geologist / EngineerLicense No	

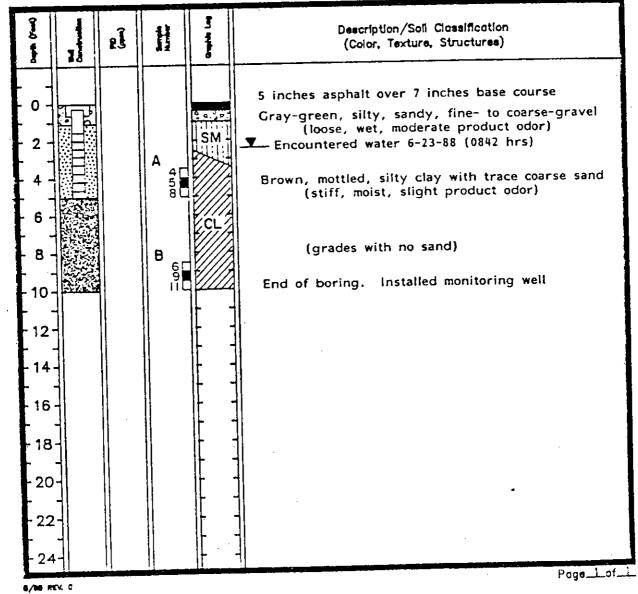


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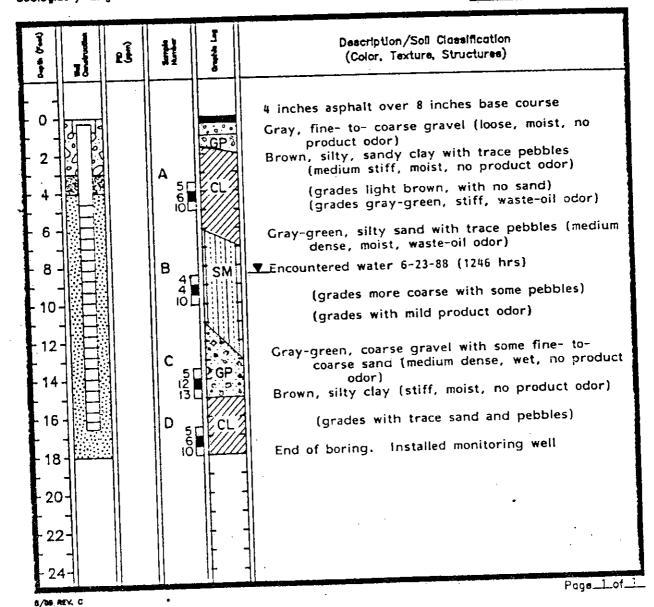
installed monitoring well

Page\_1\_of\_1\_

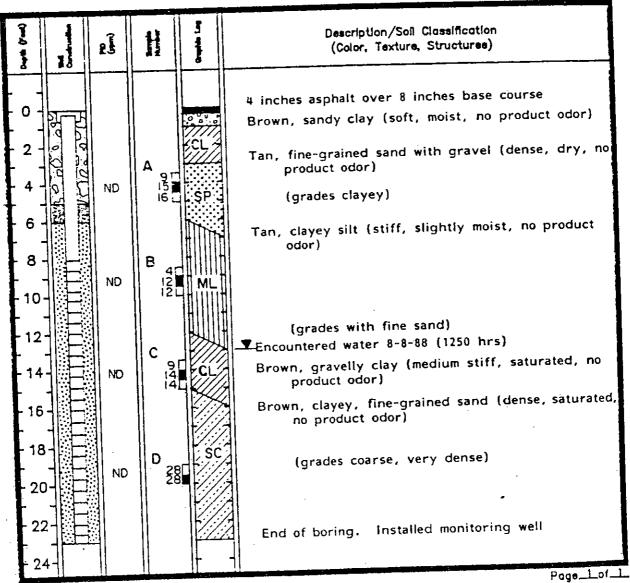
GROUNDWATER TO THE PROPERTY OF	
TECHNOLOGY, INC. Monitoring Well 5	Drilling Log
Toxaco/Farmers Owner Texaco Ref. & Mktg. Inc.	Sketch Map
Location Santa Rosa, CA Project Number 203 130 325.  Date Drilled 6-23-88 Total Depth of Hole 10 ft. Diameter 10.5 in.  Surface Elevation Water Level Initial 2.5 ft. 24-hour Screen: Dia. 4 in. Length 3.5 feet Slot Size 0.020 in.	See Site Plan
Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger Driller Christopher DeSocio Log by Steve Kranyak  Geologist / Engineer License No.	Notes:



GROUNDWATER TECHNOLOGY, INC. Monitoring Well 6	Drilling Log
- Dischilled Inc	Sketch Map
Location Santa Rosa, CA Project Number 203-150-4323.11  Date Drilled 6-23-88 Total Depth of Hole 18 ft. Diameter 10.5 in.  Surface Elevation Water Level Initial 8.5 ft.24—hour  12 feet Slot Size 0,020 in.	See Site Plan
Screen: Dla. 4 In. Length 4.5 feet Type PVC Casing: Dla. 4 in. Length 4.5 feet Type PVC Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger Driller Christopher DeSocio Log by Steve Kranyak Ceologist / Engineer License No.	Notes:

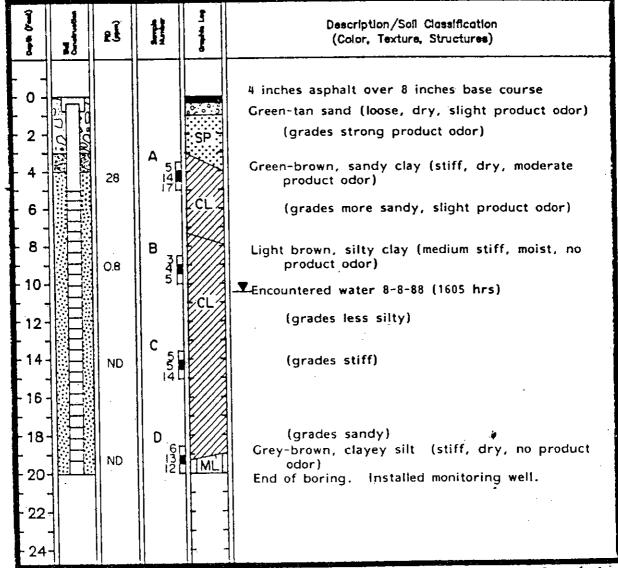


GROUNDWATER _	
TECHNOLOGY, INC. Monitoring Well _7	Drilling Log
	Sketch Map
Project Texaco/Farmers Lane Owner Texaco Refining & Marketing Inc.  Location Santa Ress, CA Project Number 203-150-4329  Location Santa Ress, CA Project Number 203-150-4329  Location Santa Ress, CA Project Number 203-150-4329  Location Santa Ress, CA Project Number 203-150-4329	
Cosing: Dia. 4 In. Length Day Hethed Hollow Stem Auger	Notes:
Dellar William Colean Log by	140,000
Geologist / Engineer License No.	

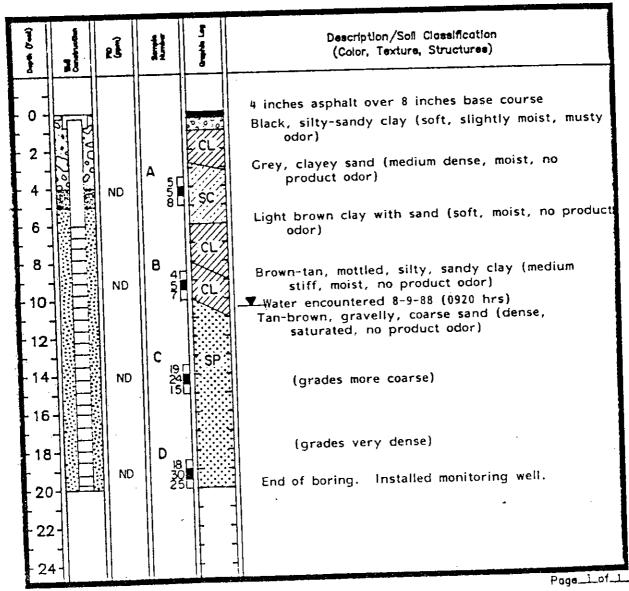


B/ME REV. C

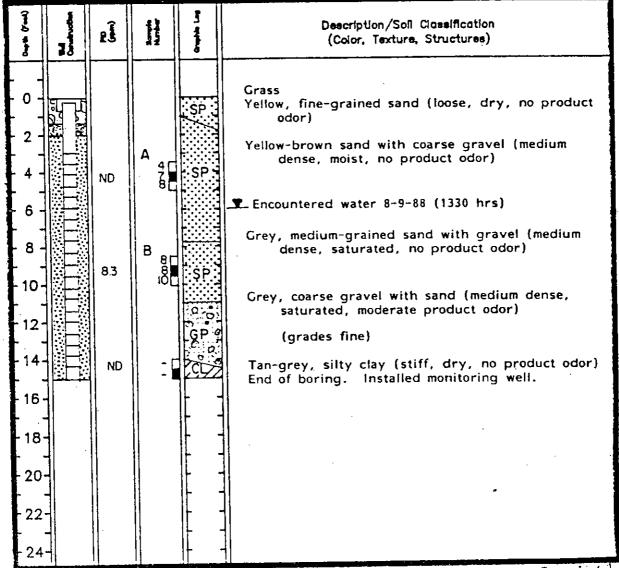
GROUNDWATER TECHNOLOGY, INC. Monitoring Well 8	Drilling Log
Project Texaco/Farmers Lane Owner Texaco Refining & Marketing Inc Location Santa Rosa, CA Project Number 203-150-4329  Date Drilled 8/8/88 Total Depth of Hole 20 ft. Diameter 10.5 in.  Surface Elevation Water Level Initial 10.5 ft. 24-hour 1.9 ft.  Screen: Dia. 4 in. Length 15 feet Slot Size 0.020 in.,  Casing: Dia. 4 in. Length 5 feet Type PVC  Drilling Company Sierra Pacific Drilling Method Holiow Stem Auger  Driller William Coleman Log by Chris Stageman.  Geologist / Engineer License No.	Sketch Map Notes:



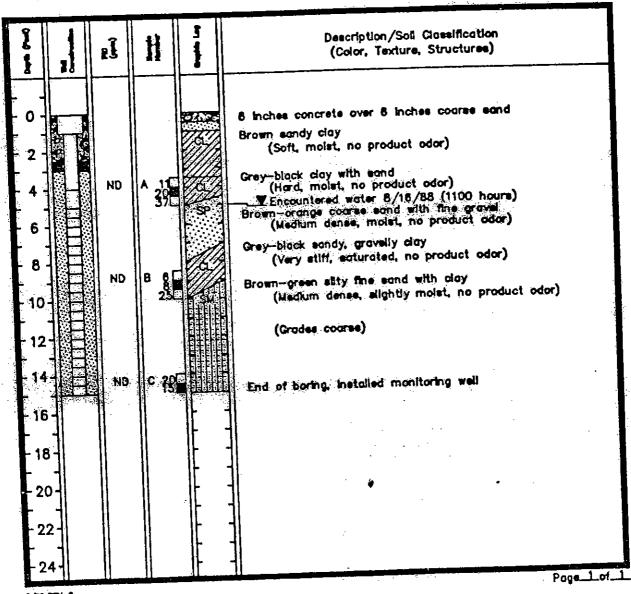
GROUNDWATER INC	Dalling Land
TECHNOLOGY, INC. Monitoring Well 9	Drilling Log Sketch Map
Project Texaco/Farmers Lane Owner Texaco Refining & Marketing Inc.  Location Santa Rosa, CA Project Number 203-150-4329  Date Drilled 8/9/88 Total Depth of Hole 20 ft. Diameter 10.5 in.  5.85 ft.	
Surface Elevation Water Level initial 222 Notes 222 Notes Size 0.020 in Screen: Dia. 4 in Length 14 feet Slot Size 0.020 in PVC	
Casing: Dia. 4 in. Length 6 feet Type PVC  Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger  Driller William Coleman Log by Chris Stageman	Notes:
Geologist / EngineerLicense No	



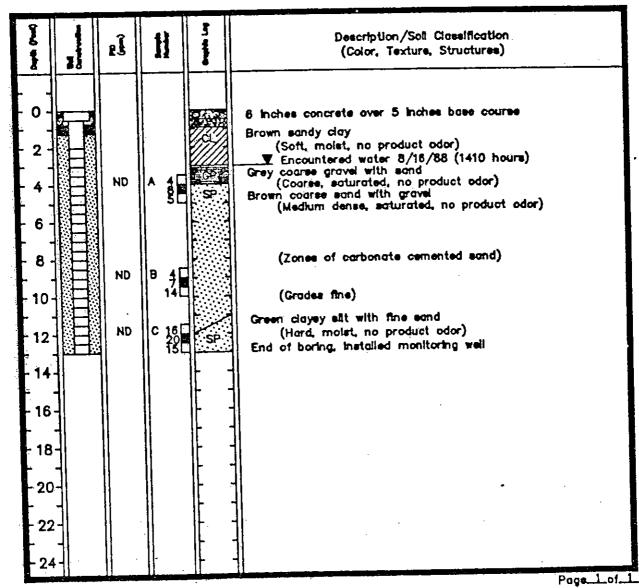
GROUNDWATER TECHNOLOGY, INC. Monitoring Well 10	Drilling Log
Project Texaco/Farmers Lane Owner Texaco Refining & Marketing	Sketch Map
Location Santa Rosa, CA Project Number 203-150-4329	
Date Dalled 8/9/88 Total Depth of Hole 15 ft. Diameter 10.5 in.	
Surface Elevation Water Level Initial 6 ft. 24-hour 4.32 ft.	ı
Screen: Dia. 4 in. Length 12 feet Slot Size 0.020 in. Casing: Dia. 4 in. Length 3 feet Type PVC	
Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger	· Notes:
Driller William Coleman Log by Chris Stageman	1000.
Geologist / EngineerLicense No	



GROUNDWATER TECHNOLOGY, INC. Monitoring Well 11	Drilling Log
TEXACO REF. & MARK, INC.	Sketch Map
Location SANIA ROSA, CALIFORNIA PROJECT ROMBO	·
Surface Elevation Water Level Initial 5 FT 24—hour—Surface Elevation Hotel Level Initial 5 FT 24—hour—Screen: Dia. 4 IN Length—11 FT Stot Size 0.020 IN Type PVC	
Screen: Dia. 4 IN Length 4 FT Type PVC Casing: Dia. 4 IN Length Drilling Method HOLLOW STEM AUGER Drilling Company SIERRA PACIFIC Drilling Method CHRIS STAGEMAN Driller WILLIAM COLEMAN Log by CHRIS STAGEMAN	
Drilling Company SIERRA PACIFIC Drilling Method Hotels STAGEMAN CHRIS STAGEMAN	Notes:
Geologist / Engineer License No.	ND = NON DETECABLE



GROUNDWATER TECHNOLOGY, INC. Monitoring Well 12	Drilling Log
Project TEXACO/FARMERS LANE Owner TEXACO REF. & MARK. INC. Location SANTA ROSA, CALIFORNIA Project Number 203-150-4328  Date Drilled 8/16/88 Total Depth of Hole 13 FT Diameter 10.5 IN  Surface Elevation Water Level Initial 3 FT 24-hour Screen: Dig. 4 IN Length 11 FT Slot Size 0.020 IN	Skertch Map
Casing: Dia. 4 IN Length 2 FT Type PVC Drilling Company SIERRA PACIFIC Drilling Method HOLLOW STEM AUGER Driller WILLIAM COLEMAN Log by CHRIS STAGEMAN Geologist / Engineer License No.	Notes: ND = NON DETECABLE



### Monitoring Well 13

Project Texaco/Farmers Lane	Dener Texaco Refining and Marketing Drilling Log
gration Santa Rosa	Project Number 205 150 4329
Date Orilled 4/17/90 Total Des	oth of Hole 19571 Diameter 105 In For Boring Location
Surface Flevetion Water Lev	(e) Initia) 8.0/1. 24-hour 2.5/1.
Screen Die 4 in. Length _	Slot Size O O20 In   NOTES:
Casing: Dia <u>4 in.</u> Langth _	9.5 (t. Type Sch 40 PVL
Filter Pack Material Lonester #2/12	Sand
Drilling Company <u>Sierra Pacific Pril</u>	Ling Orilling Method _Hollow Stem Auger
Oriller Denald Harris	Log by . Chris McCornack
Geologist/Engineer A.B. Storm	License No FG. 4394
Depth (feet) Nell Completion PID Completion Sample ID Blow Count Graphic	Description (Color, Texture, Structure)
-0 -0 0 10 000	6 inch asphalt over 12 inch aggregrate base (alight to moderate odor in aggregrate).  Black clay with green stringers (wet, no odor)
- 4 -0 0 B 27	Medium dank brown silty clay (medium stiff, moist to slightly wet, no odon).  (locally sandy, rare fine to medium sand)
0 C 36 D 15 D 1	Medium to dark brown silty clay, increasing silt, grades more crumbly (medium stiff to soft, moist to slightly wet, no odor).  **Encountered Mater 4/17/90 (1115 hours).
0 23 10 10 10 10	Dank brown grading to tan to light greenish whitish tan sandy-silty clay with local gravelly sand stringers (medium stiff, saturated, no odor) togrades to very stiff, wet, no odor)
- 12 - 0 10 12 H 18 M	Light brown to tan, some local white to preenish white sandy-silty clay (stiff, wet to saturated, no odor).
0 I 15 I 12	Light brown clayey sand with occasional gravel, very poorly sprted (saturated, no odor).
- 18 - 0 K 12	SC Bottom of boring Installed monitoring well
- 55 -	
- 24 - - 26 -	
<u> </u>	Page 1 of

05/25/1990

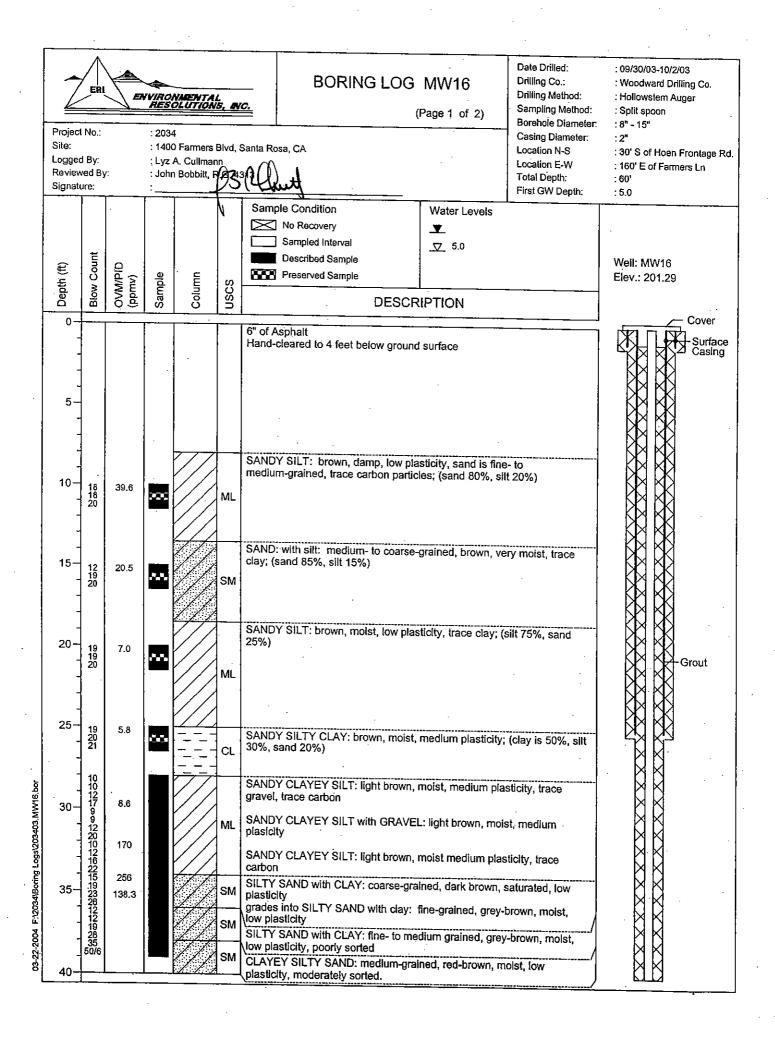
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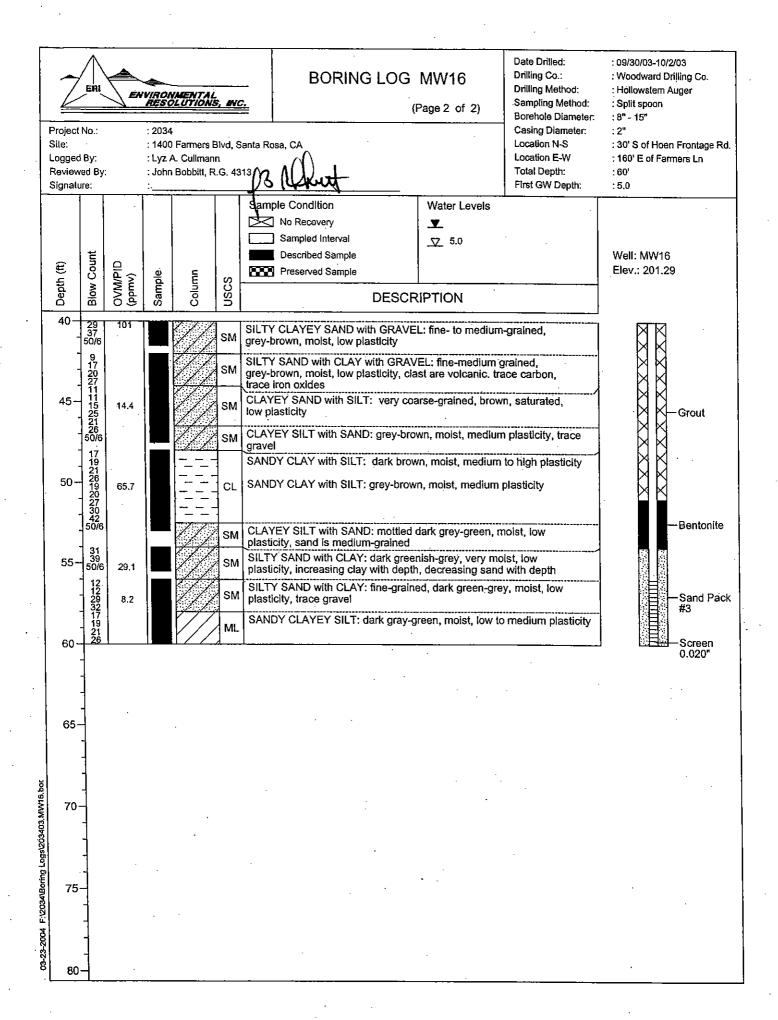
### Monitoring Well 14

	Texaco Refining and Marketing	Drilling Log
Project Texaco/Farmers Lane	Dimer 205 150 4329	
Location Santa Rosa	Project ISSS: Dispeter 10.5 in.	See Site Map For Boring Location
Date Drilled 4/17/90 Total Depth	25 ft. 24-hour 7 ft.	
Surface Elevation Water Level Screen: Dia 4 in Length 6 //	Slot Size 0.020 in.	NOTES:
Screen: Dia 4 in Length 5 in Length 10 in Le	Type Sch 40 PVC	1
		1
Filter Pack Material Lonestar #2/12 San Drilling Company Sterna Pacific Orillin	Drilling Method Hollow Stem Apper	1
		.1
Oriller Derald Harris	License No <u>FG 4394</u>	.
Ge 0 100 181/Elify life i	<b>س</b>	
Depth (feet)  Well Completion pio (opm)  Sample ID Blow Count (Graphic Log	no nesc	ription ure, Structure)
	Black organic clay (stiff, moist.	no odori .
	BIBLE OF Garrie Con	
	a	
	147.00 4615.1	west .
	Encountered mater 4/17/90 (1515 F	LIUN ID BEGION OF STAFF
	Alfu occasional Buasai margin	ited, no odor).
L4-19 19 " H///	4 sc	1
B •	Light gray to gray green sandy-s	ilty clay, occasionally
	[7] [ GL9A6]]A. JOC91 DIRCK act times	rs (soft to medium Stiff.
1 6 - B 1 B 1 B 1	moist, no odor)	
- B - B - B - 13 - 17		. · · · · · · · · · · · · · · · · · · ·
C 16	Encountered water 4/17/90 (16	OD hours).
	Encountered water 4/1/90 1/0 Light gray to gray green sandy to (soft to medium stiff, satur	ated, no odon)
- 10-1   - 10-1   - 10-1//	28	
	Light to medium gray to grayish well sorted, very few fines.	tan medium grain sand. Flowing sand
	(saturated, no odon)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	· [ [ [ [ [ ] ] ] ] ] [ [ ] [ [ ] ] [	i e
	Bottom of boring Installed mo	noitarina well.
	Bottom of boring installed	
16 <del>                                     </del>		
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	-1 1	
- 18 -	<u> </u>	
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<b>↓ ↓ ∥ ∥ ├</b>	1 1	·
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- 26		Page 1 of 1
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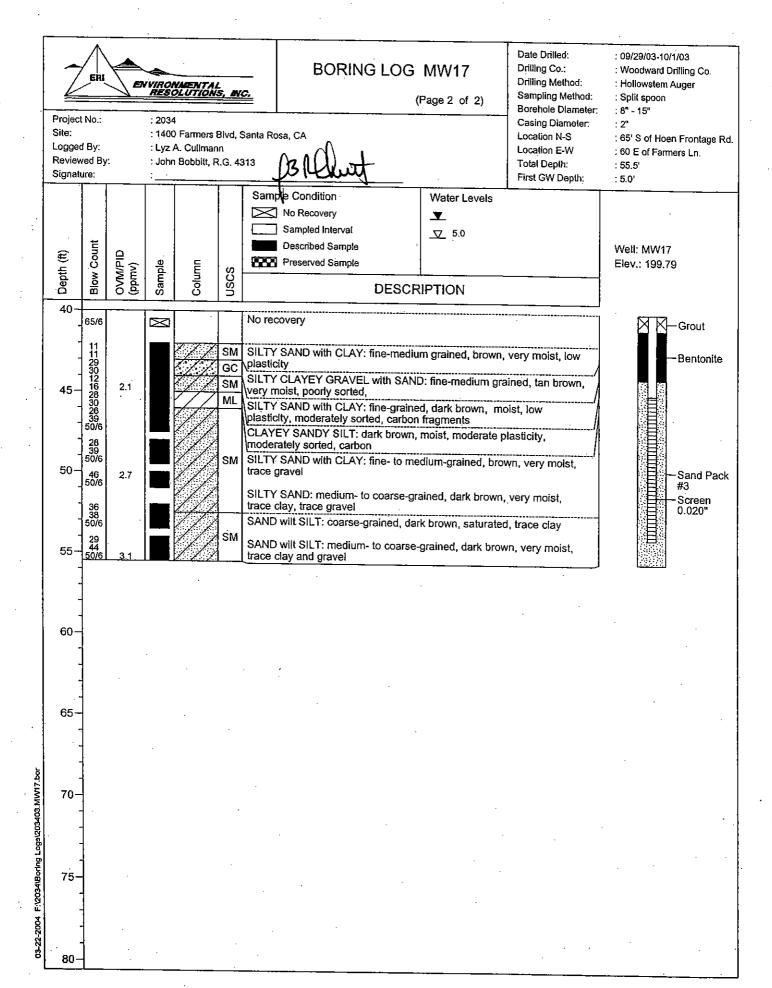
05/25/1990

$\overline{\Lambda}$				2004	<del></del>	
ERI			- C:1.	pject No.: 2034 Boring: B15/MW15 Plate: Al	PENDIX	
ERI	EN VIRONI RESOL	MENTAL UTIONS, INC.		e: <u>Former Exxon Service Station 7-0276</u> Date: ll Contractor: <u>Gregg Drilling</u>	6/9/00	
Samp				n Geologist: JOHN B. Bo	~ ^BBITT	
Drill	Rig: <u>M</u>	<u>obil B-61</u>	<u>.                                    </u>	Bore Hole Diameter: <u>8"</u> Signature:	<u> </u>	
Locat	ion:	<u>On the S</u>	<u>outh Sh</u>	<u>loulder of Hoen Frontage</u> Registration: R.G.	4313	
	57 <u>-</u> F	Road Near	r Farme	ers Lane Logged by: Tom Culi	g	
	STORES POR	ST CHE ST	THE SE	GEOLOGIC DESCRIPTION	AL DESCRIPTION OF THE PROPERTY	
				8" roadbase 4" fill		
<del></del>				Sandy clay with gravel to 1", gray, low plasticity, dry		
			]			
	0.0		-			   <del> </del>
	26		CL			Cement
			]	greenish gray, medium plasticity		Cer
						at
	<u>▼</u>		{	saturation at 4', clay with fine sand, damp		Neat
-5-		H	] ]	,		
				gray clay with fine sand wery high ploaticity		ut:
34				gray clay with fine sand, very high plasticity, 85% clay		Grout:
	3					•
-						#3
38	}	<u> </u>				#
			G.D.	Sandy gravel, tan, moist		l
			GP			Size:
10-24	0.0					
				Total depth at 10 feet. Groundwater encountered at 4 feet.		Sand
<u> </u>				and the second s		, Ω
						g
						0.020
						Size
						Slot
-   ·						1
-						_
						  -  -
						Diameter
						ìТ
						ng
						Casing
FN: 2034B15	<u> </u>	<u> </u>				J





	Project Site: Logge Review Signat	d By: wed By	B	: 203 : 140 : Lyz	4 0 Farmers A. Cullman n Bobbitt, F	Blvd,	Santa Ro		ORING L		MW17 Page 1 of 2)	Date Drilled: Drilling Co.: Drilling Method: Sampling Metho Borehole Diametel Location N-S Location E-W Total Depth: First GW Depth:	ler. : 8" - 15"	Prilling Co. Auger n Frontage Rd.
<u>.</u>	Depth (ft)	Blow Count	OVM/PID (ppmv)	Sample	Column	nscs		ole Condition  No Recover  Sampled In  Described Seconds  Preserved Seconds	ry stervat Sample Sample	SCRI	Water Levels ▼	<del></del>	Well: MW17 Elev.: 199.79	
	0- - - -						6" of A Hand-	asphalt cleared to 4	feet below g	round :	surface			Cover Surface Casing
	5 - -	21 22 25				<b>SM</b>	SAND moist,	with SILT: poorly grad	medium- to ded; (sand 80	coarse %, silt	grained, orang 20%)	e-brown, very		
	10- - -	35 50/6	· 0.0	8		G₽	model	Y GRAVEL ately grade I 60%, sand	o. Sub-angula	se (0.2	0"-1.5"), browr I is coarse-gra	i, saturated, ned, trace clay;		
	- 15- - -	17 19 25	0.0				SAND graded	with GRAV ; (sand 80%	/EL: coarse-g %, gravel 40%	rained, 6)	brown, salura	led, poorly		
	20-	30 36 39	0.0	<b>.</b>		SP					·			- Grout
	25— 		·	·		ML	SILT: v	vith SAND: carbon parti	brown, damp	), low p	lasticity, sand	s fine-grained,		
203403.MW17.bor	30 <del>-</del>	28 40 50/6 35 42 50/5	9.8			SW	SILTY brown, 20%, s	GRAVELLY very moist lit 18%, cla	Y SAND with , low plasticity y 12%) with SAND: fin	clay: r y, sub-	nedium- to coarounded; (sand	50%, gravel		
03-22-2004 F.\2034\Borlng Logs\203403.M\V17.bor	35—	39 47 50/3 37 45 50/5 29	9.5			ML	SAND' sub-an	SILT with gular, volca	GRAVEL wit	th CLA	slit 20%, sand Y: molst, low pl	15%) asticity, -grey, moist, low		
03-22-2004	40-	50/5 45 50/6				SM	SILTY low pla clasts	SAND with sticity, poor	GRAVEL: me dy sorted, gra	edium- avel is f	grained, light b ine (0.20"-0.75	rown, very moist, "), volcanic		





### BORING LOG MW18

(Page 1 of 3)

Date Drilled:

Drilling Co.:

**Drilling Method:** 

Sampling Method:

Borehole Diameter:

Casing Diameter:

Location N-S

Location E-W

Total Depth:

First GW Depth:

: 10/25/04-10/27/04

: Hollowstem Auger

: Split spoon

: 48 feet bgs.

: 8" - 15"

: 2"

: 5.01

: Woodward Drilling Co.

: 34' N Hwy 12 off ramp

: 35' W of Farmers Lane

Cover Surface

Pro	iect	No.:	

: 2034

Site:

: 1400 Farmers Blvd, Santa Rosa, CA

Logged By: Reviewed By: : Lyz A. Cullmann

Signature:

: John Bobbitt, R.G. 4313

Sample Condition

No Recovery

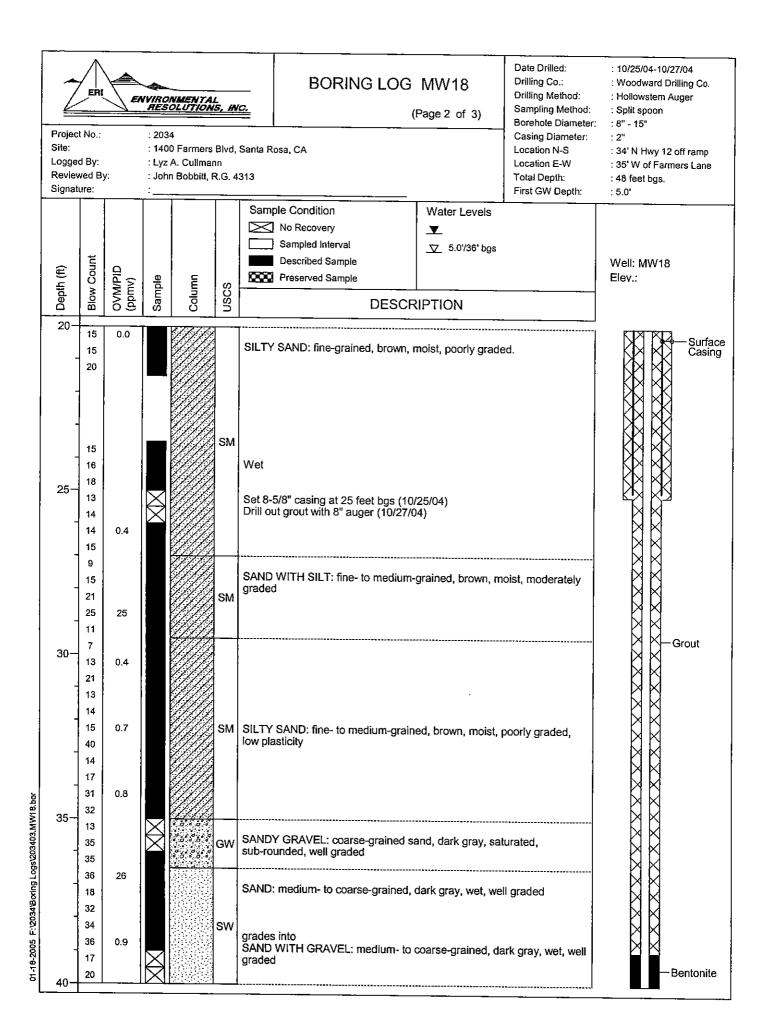
Water Levels

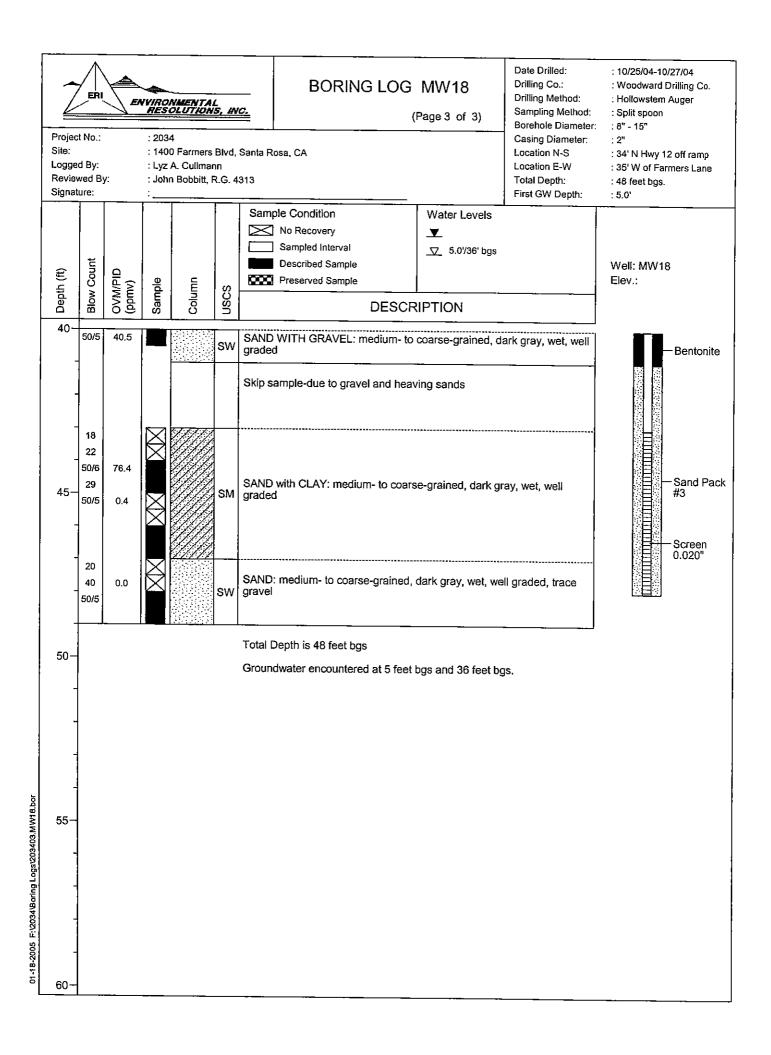
**Y** Sampled Interval Blow Count Described Sample Well: MW18 OVM/PID (ppmv) Sample Elev.: Column Preserved Sample uscs **DESCRIPTION** Cleared by vacuum extraction to 6 feet below ground surface SANDY CLAY: brown, moist, medium plasticity; medium to coarse grained sand. CL 5. 21 SILTY SAND: fine- to medium-grained, brown, wet, poorly graded 22 25 SM No Recovery 10-35 0.0 50/6 grey-brown, 1" of recovery 15-Sandy Gravel: brown, wet, well graded, sub-rounded 17 0.0 19 25 GW

Grout

01-18-2005 F:\2034\Borlng Logs\203403.MW18.bor

20





Project No.: 203403 Boring: B16 Plate: 1 OF	<u> </u>
Site: <u>Former Exxon Service Station 7-0276</u> Date: <u>11/</u> Drill Contractor: <u>ERI Personnel</u>	<u>′1/01</u>
Sample Method: Hand Auger Geologist: John B. Bobbi	<u>tt</u>
Drill Rig: <u>Hand Auger</u> Bore Hole Diameter: <u>4"</u> Signature:	
Location: 6 feet east of utility vault on centerline of Registration: R.G. 431  Hoen frontage road at 1400 Farmers Lane Logged by: Jeff Hislop	<u> </u>
GEOLOGIC DESCRIPTION	WELL CH
GM Gravel: with silty sand, gray green, fine to	7//
GM Gravel: with silty sand, gray green, fine to	
Silty clay: dry, light brown, low plasticity	
Total depth = 5.5 feet	Type
	, ,
	Portland
-10-	Po
	Grout:
	Gr
-15-	<del> </del>
	{
	Size:
-20-	Sand
	Sa
	, i
-25-	N/A
	Size:_
	Six
	Slot
-30-	
	N/A
	7
-35-	ter:
	Diameter:
	Die
	Casing
40-	Cas
FN: 2034B16	

	D	
	Project No.: 2034 Boring: B17 Plate: AP	PENDIX
ERI EN VIRONMENTAL RESOLUTIONS, INC.	Site: Former Exxon Service Station 7-0276 Date:	6/9/00
	Drill Contractor: Gregg Drilling	
Drill Rig: NA	Auger Geologist: JOHN B. BO	BBII.I.
Location: Retween the	Bore Hole Diameter: Signature:	
Frontage Roa	Two Westbound Lanes of Hoen Registration: R.G. d. 220' East of Farmers Lane Logged by: Janice Jac	4313
/.w/ / / /		
	A COLOGIA DESCRIPTION	With the let
	GEOLOGIC DESCRIPTION	Well stor
	8" roadhasa	\\dag{\dag{\dag{\dag{\dag{\dag{\dag{
	8" roadbase Gravelly sand, tan, dry	
SP		
	sand, moist	
=	Total depth at 6 feet	Neat Cement
<del>  </del>	Total depth at 6 feet. Groundwater encountered at 6 feet.	1
-10-		
		Grout:
		ro
		l i
		NA
	}	
		Size:
		pur
		San
	1	
		. 4
		NA
		Size:
		Slot
		NA
<u> </u>		
<u> </u>		i i
F -		   Diameter
		— me
<u> </u>		 
<del>                                      </del>		Casing
<u> </u>		Cas
FN: 2034B17		

Λ	
Project No.: 203403 Boring: B18 Plate: 1 OF 1	_
Site: Former Exxon Service Station 7-0276 Date: 12/18/01  Prill Contractor: ERI Personnel	-
Sample Method: Hand Auger Geologist: John B. Bobbitt	-
Drill Rig: Hand Auger Bore Hole Diameter: 2.5" Signature:	-
Location: <u>6 ft east and 6 ft south of utility vault on Registration</u> : R.G. 4313	_
centerline of Hoen frontage Rd at 1400 Farmers Ln Logged by: Jeff Hislop	-
GEOLOGIC DESCRIPTION LET LET STATE OF THE PROPERTY OF THE PROP	
Asphalt: 8 inches	
GM Gravel with silty sand: light brown, gravel fine to coarse, sub-angular	<u> </u>
Total depth = 3.5 feet	1
	Type
	1 1
	Portland
	ort
	Grout:
	٥
-15-	Ą
	P
	Size:
-20-	
	Sand
	7
-25-	N
	Size:
	Si
	Slot
-30-	
	A
	N
35-	Diameter:
	ame
	Casing
-40-	Cas
FN: 2034B18	

		<del></del> -
	Project No.: 203403 Boring: GP1 Plate: 1	OF 1
EN VIRONMENTAL RESOLUTIONS, INC.	Site: Former Exxon Service Station 7-0276 Date:	10/22/01
		<del></del>
	Hammer / Geoprobe Geologist: John B. Bol	
Jenstian 65 feet w	Bore Hole Diameter: 4" Signature:	4040
and 13 fee	est of Farmers Lane Registration: R.G. t north of Highway 12 Logged by: Jeff Hislor	4313
/x)/ / //		
	GEOLOGIC DESCRIPTION	\2\2\2\2\2\2\2\2\2\2\2\2\2\2\2\2\2\2\2
\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	GEOLOGIC DESCRIPTION	NEW SE
0 S		
-10-	Water at 7 feet Moderatily sorted sand: medium to coarse grained, rounded, moist	Grout: Portland Type
-15-	Sandy gravel: saturated, sub-rounded to sub- angular, fine to coarse, coarse sand, rounded	
-20-	Total depth = 21 feet	, Sand Size:
-25-		N/A
		Size
		Slot
		er:
		Diameter:
		)iar
		Casing
		C <sub>a</sub>
FN: 2034GP1	<u></u>	

$\overline{\mathbb{A}}$	<u> </u>		Project No.: 203403 Boring: GP2 Plate:	1 OF 1
ERI	ENVIRON	MENTAL LUTIONS, INC.	Site: Former Exxon Service Station 7-0276 Dat	e: 10/22/01
Samr			Drill Contractor: <u>Vironex</u>	
Drill	Rig: <u>6</u>	600	e Hammer / Geoprobe Geologist: John B. H —— Bore Hole Diameter: <u>4"</u> Signature:	<u> 3obbitt</u>
Locat	ion:	35 teet	north of Highway 12 Registration: R.G.	£ 4313
	<u></u>	<u> 50 feet v</u>	vest of Farmers Lane Logged by: Jeff His	lop
Et.		STATE OF S	STOLOGYS DESCRIPTION	/ <sub>33. Ab</sub>
	2011 210 V	A CHI CHI	GEOLOGIC DESCRIPTION	Tell teles
			ML Clayey silt: light brown, low plastcity, slightly moist; 5-10% fine gravel, sub-rounded	
			moist, 5 10% line graver, sub-rounded	
	0			\///\ <b>=</b>
-5-	<u></u>			
			Silty along Tight have	ly La
-10-	0 <u>\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}</u>		CL Silty clay: light brown, medium plasticity, slight moist	ly //// ¿
-	=	~		
			damp at 10-12 feet	
			GC Gravely silt with clay: light brown, dry, medium plasticity, gravel coarse to fine, sub-rounded	
-15-	0		1 yy Banara a ana a a a a a a a a a a a a a a	<b>√</b> /// ≥
			Same as above, no recovery	
20-			Total depth = 20 feet	Sand
				%
-25-				
	ļ			Size:
				Slot
-30-				
<del> </del>				\ \
35-				eter
				Diameter
				Casing
40-				Ca
FN: 2034GP2				

Project No.: 203403 Boring: GP3 Plate:	 I OF 1
Site: Former Exxon Service Station 7-0276 Date	e: 10/22/01
Drill Contractor: Vironex	
Sample Method: Slide Hammer / Geoprobe Geologist: John B. F. Drill Rig: 6600 Bore Hole Diameter: 4" Signature:	Bobbitt
Location: 28 feet west of Farmers Lane Registration: R.G.	4313
62 feet north of Highway 12 Logged by: Jeff Hisl	op
GEOLOGIC DESCRIPTION	MELY SECT
GP Sandy gravel: coarse, saturated	
Crades into silty slaw on the dog of	【フンフカヨ
Grades into silty clay: up to 10% fine sand, brow medium plasticity, moist	n d A
Silty sand: fine-grained, saturated, brown, 10% fine gravel, well rounded, sand sub-rounded	
I I I I I I I I I I I I I I I I I I I	Portland
Sandy clayey silt, light brown, slightly damp	Grout:
January damp	//// క్ర
	//// i
-15-   ML	
	_////1
Silty sand: fine-grained, light brown, saturated, 10% fine gravel, rounded	
	Size:
20- Total depth = 20 feet	Sand
Total depth = 20 feet	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
-25-	
	Size:
	Slot
30-	No.
	YN
	4
35	er:
	Diameter
40-	Casing
FN: 2034GP3	

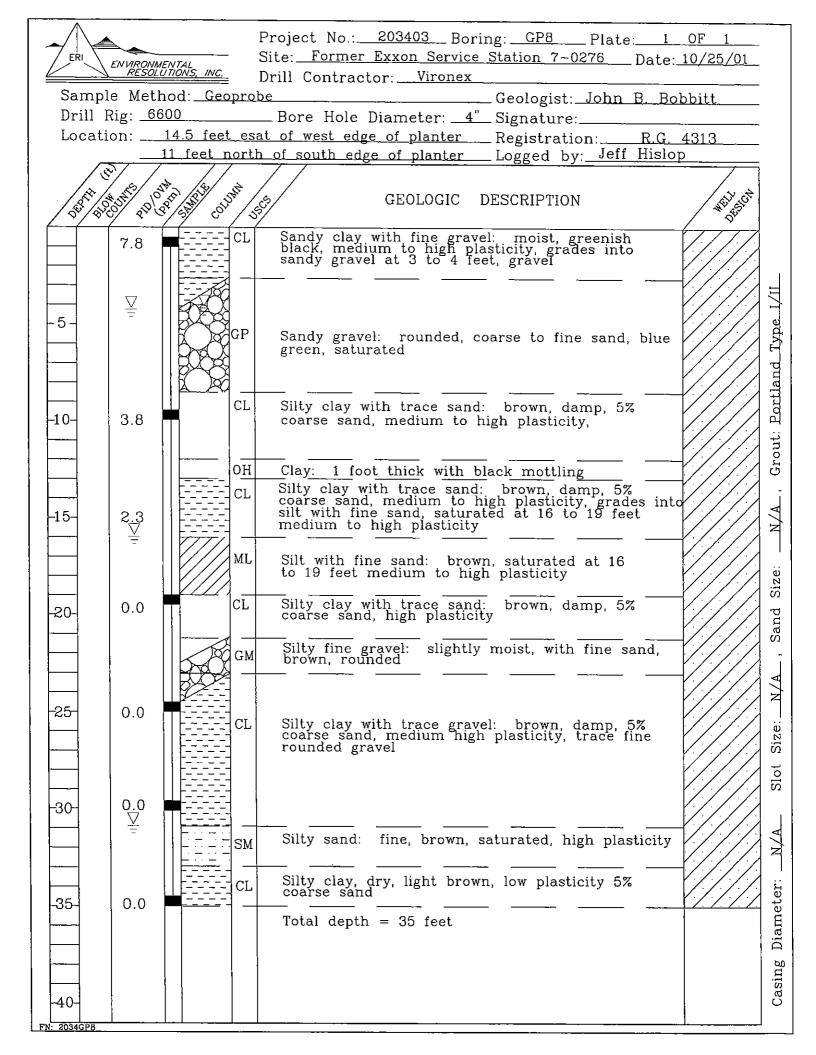
Project No. 203403 Boring: CP4 Plate: 1 OF Stee Former Exon Service Station 7-0276 Date: 10/23/01 Drill Contractor: Vironex  Sample Method: Geoprobe Bore Hole Diameter: 4 Signeture:  Location: 9 feet north of Highway 12 Registration R.C. 4313  36 feet west of Fermers lane Logged by: Jeff Hislop  GCC Sandy gravel with clay: gravel fine to coarse, rounded to sub-rounded sand fine to coarse, sub-angular, slightly damp gravel gravel gravel fine to coarse, rounded to sub-rounded sand fine to coarse, sub-angular, slightly damp gravel g	$\bigcap$		D : 1 M C00100 D : 077	<del></del>	_
Sample Method: Geoprobe  Sample Method: Geoprobe  Drill Rig: 6800  Bore Hole Diameter: 4" Signature:  See Location: 9 feet north of Highway 12 Registration R.G. 4313  36 feet wast of Farmers Lane Logged by Jeff Hislop  GEOLOGIC DESCRIPTION  GEOLOGIC DESCRIPTION  GEOLOGIC DESCRIPTION  Sandy gravel with clay: gravel fine to coarse. rounded to sub-rounded sand fine to coarse.  Sandy gravel with clay: gravel fine to coarse. sub-angular, slightly damp, brown  Sandy gravel with clay: gravel fine to coarse. sub-angular slightly damp, gray green, saturated  CL Clay light brown, low plasticity, slightly damp  Grades to clay with 10% silt  Silty Glay to clayey silt; light brown to brownish slightly moist to dry plasticity, grades from  Total depth = 20 feet  Total depth = 20 feet				<u>OF 1</u>	
Sample Method: Ccoprobe Drill Rig: 6600 Drill Rig: 6600  9 feet north of Highway 12  36 feet west of Farmers Lane Logged by: Jeff Hislop  GEOLOGIC DESCRIPTION  GCC Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, urown  Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, urown  Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, urown  Clay: light brown, low plasticity, slightly damp  Grades to clay with 10% silt  Silty Clay to clayer silt: Ight brown to brownish gray, low to credium plasticity, grades from  ML  Silty Clay to clayer silt: Ight brown to brownish gray, low to credium plasticity, grades from  Total depth = 20 feet  Total depth = 20 feet	ENI	VIRONMENTAL RESOLUTIONS, INC.	Drill Contractor: Virgney	<u> 10/23/01</u>	
Doration:  Description:  Descr				T. 1. 24.1	
Jest north of Highway 12 Registration: R.G. 4313  36 feet west of Farmers lane Logged by: Jeff Hislop  GEOLOGIC DESCRIPTION  GEOLOGI	Drill Rig	6600	Bore Hole Diameter: 4" Signature:	DDDITT	
GEOLOGIC DESCRIPTION	Location	: <u>9 feet no</u>	rth of Highway 12 Registration: RC	4313	
GEOLOGIC DESCRIPTION  GC Sandy gravel with clay: gravel fine to coarse, rounded to sub-rounded; sand fine to coarse, sub-angular, slightly damp, brown  Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp sub-angular, slightly damp sub-angular, slightly damp sub-angular, slightly mount for day gravel fine to coarse, sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp sub-angular, slightly damp sub-angular, slightly damp sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp sub-angular, slightly damp, gray green, saturated sub-angular, slightly damp sub-angular, slightly da		<u>36_feet_wa</u>	est of Farmers Lane Logged by: Jeff Hislo	<u>4010                                   </u>	
Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, brown  Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, brown  Sandy gravel with clay: gravel fine to coarse, rounded to sub-rounded; sand fine to coarse, sub-angular, slightly damp, gray green; saturated  Clay: light brown, low plasticity, slightly damp  Clay: light brown, low plasticity, slightly damp  Gravel to claye with 10% silt  Silty clay to clayey silt; light brown to brownish slightly moist to dry  Silty clay to clayey silt; light brown to brownish slightly moist to dry  Total depth = 20 feet  Total depth = 20 feet	\ <u>\&amp;</u> \				
Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, brown  Sandy gravel with clay: gravel fine to coarse, sub-angular, slightly damp, brown  Sandy gravel with clay: gravel fine to coarse, rounded to sub-rounded; sand fine to coarse, sub-angular, slightly damp, gray green; saturated  Clay: light brown, low plasticity, slightly damp  Clay: light brown, low plasticity, slightly damp  Gravel to claye with 10% silt  Silty clay to clayey silt; light brown to brownish slightly moist to dry  Silty clay to clayey silt; light brown to brownish slightly moist to dry  Total depth = 20 feet  Total depth = 20 feet		Sold of Self Child		WELL SELECT	
Sandy gravel with clay: gravel fine to coarse, rounded to sub-rounded; sand fine to coarse, sub-angular, slightly damp, gray green; saturated  Clay: light brown, low plasticity, slightly damp  Clay: light brown, low plasticity, slightly damp  Grades to clay with 10% silt  Silty clay to clayey silt; light brown to brownish gray, low to medium plasticity, grades from  MIL  20-  Total depth = 20 feet  Total depth = 20 feet			C Sandy gravel with clay: gravel fine to coarse, rounded to sub-rounded; sand fine to coarse, sub-angular, slightly damp, brown	5	7
grades to clay with 10% silt  Silty clay to clayey silt; light brown to brownish gray, low to medium plasticity, grades from  ML  20-  Total depth = 20 feet  Total depth = 20 feet  Total depth = 20 feet	-10-			V - Z - Z - Z - X	
Silty Clay to clayey silt. light brown to brownish gray, low to medium plasticity, grades from  ML  Total depth = 20 feet					
20   0.0   Total depth = 20 feet   20   25   25   25   25   25   25   25	-15-			2	2
Casing Diameter: N/A. Slot Size: N/A.	20-	ШИ			
Casing Diameter: N/A Slot Size:	$\vdash$			0.	J
35- 35- 35- 35- 35- 35- 35- 35- 35- 35-	-25-				l
-35- -35- -35- Diameter: N/A				1	
-35- -40- Diameter: N/A					2
-35- -40- Vasing Diameter:	30-				
-35- -40- Vasing Diameter:					1
Casing				2	‡
Casing					  -
Casing	35				1)
Casing					7117
Casing					រុ
	10			 	3
				"	)

		<del></del>	
	Project No.: 203403 Boring: GP5 Plate: 1	OF 1	
ENVIRONMENTAL RESOLUTIONS, INC.	Site: Former Exxon Service Station 7-0276 Date:	10/23/01	
	Drill Contractor: Vironex		
Daill Dia: 6600	obe Geologist: <u>John B. Bo</u>	bbitt	
Josephian: 18 feet no	Bore Hole Diameter: 4" Signature:		
27 feet wes	th of Highway 12 Registration: R.G. t of Farmers Lane Logged by: Jeff Hislo	4313	
		<u> </u>	
	A GROLOGIA PROGRAMA	/,, ,	
	GEOLOGIC DESCRIPTION	REP. ST.	
GM C	Sandy gravel: light brown, slightly moist, grades to coarse, sub-rounded; sand medium to fine grained, sub-angular, 5% clay, 5% silt		
	grained, sub-angular, 5% clay, 5% silt		
		V////.	_
			7
-5-	Silty gravel with clay: green gray, rounded gravel,		Type
	10% clay, high plasticity, saturated		$\uparrow$
	Garal G. 1 05% to 15%		卥
	Sandy Gravel: 85% fine, 15% coarse rounded, saturated, gray green sand, medium to fine		Portland
10	saturated, gray green sand, medium to fine grained, sub-angular		ä
ML ML	Clayey silt: moist, light brown medium plasticity		Grout:
	processory		3
			ĩ
-15- SM	Silty sand: moist		\$
			4
	Silty sand with 5% clay		Size:
20	·	[/ / / / ]	
	Total depth = 20 feet		Sand
		) 0	מ
<del>  </del>		ļ	j
$\vdash$ $\downarrow$ $\downarrow$			N N
-25-			
			Size:
		†	Slot
-30-		"	מ
			1
			₹ .
		2	Z
		ļ ļ	
-35-			viameter
	·		Ě
		"   "	Ĭ
		8	<u>п</u>
		'.	casıng
-40-		ت	ز
FN: 2034GP5			

$\wedge$	Project No. 203403 P : CDG P: 4	
ERI	Project No.: 203403 Boring: <u>GP6</u> Plate: 1 Site: <u>Former Exxon Service Station 7-0276</u> Date:	<u>OF 1</u>
ENVIRONMENTAL RESOLUTIONS, INC.	Drill Contractor: Vironex	10/23/01
Sample Method: Geopr	obe Geologist John B Bo	hhitt
Drill Rig: 6600	Bore Hole Diameter: <u>4"</u> Signature:	DDTCC
Location: <u>35 feet no</u>	rth of Highway 12 Registration: R.G.	<u>4</u> 313
24 feet we	st of Farmers Lane Logged by: Jeff Hislo	p
	GEOLOGIC DESCRIPTION	WELL SELLE
M.	Clayey silt with gravel: light brown, low plasticity, damp, 10% fine to coarse gravel	
	Silty clay with sand: gray green, moist, medium	
-5- 17 ↓ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Silty clay with sand: gray green, moist, medium plasticity, 5% fine sand	Type and the state of the state
		V · / · / · / · / ·
		Portland
-10-	Silt: brownish gray, saturated, high plasticity	
	<del></del>	Grout:
G	Clayey gravel with sand: poorly sorted, fine to coarse gravel, sub-rounded; clay gray green high plasticity, fine to coarse sand, saturated	//// i
-15-	mgn plasticity, fine to coarse sand, saturated	
GF	Sandy gravel: fine-to coarse-grained, sub-	
	rounded, saturated, sand fine—to coarse—grained, sub—angular	Size:
		Sand
	Total depth = 21 feet	
		N/A
-25-		
		Size:
		Slot
-30-		
<b>├</b> ─		A
		) X
		]
35-		ter
		Diameter:
		— Dia
		n gu
40-		Casing
FN: 2034GP6		

$\wedge$			Project No.: 203403 Boring: GP7 Plate: 1	
ERI	ENLABONI		Site: Former Exxon Service Station 7-0276 Date:	10/24/01
		MENTAL UTIONS, INC.	Drill Contractor: <u>Vironex</u>	
Samp	le Metl	hod: <u>Geopr</u> e	obe Geologist: <u>John B. Bc</u>	bbitt
Drill	Rig: <u>_66</u>	500	Bore Hole Diameter: <u>4"</u> Signature:	
Locat	ıon:	9 feet west	of east edge of planter Registration: R.G.	4313
/\	X) /		h of south edge of planter Logged by: Jeff Hislo	<u>p</u>
\$\$\\\ \partial \text{\$\frac{1}{2}\text{\$\frac{1}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}\text{\$\frac{1}	10 1 10 10 10 10 10 10 10 10 10 10 10 10	A CHILLE CHILL	GEOLOGIC DESCRIPTION	WE TESTER
	$\overline{\overline{\underline{\nabla}}}$	H GP	<del></del>	
	_		Gravel with sand: gravel rounded, fine to coarse, green blue; moist to saturated	
			to coarse, green blue; moist to saturated	
-5-	8.0	+		
	0.0	+		Type
<u> </u>			Sandy clay with trace groups	<i>V / / / /</i>
<del></del>			Sandy clay with trace gravel: green gray; gravel sub-rounded; moist to saturated	Portland
10		GP		
-10-		SP	Coarse sand: gray green, angular, moist	1/ / / / /
				Grout.
	8.0	[======]cl	Silty clay with sand: brownish gray, black	1//// 5
<del></del>	8.0		mottling, slightly damp, 0.5 cm thick, black (carbonacous) lenses, low to no plasticity, 10% fine	
-15-			saild near 15 feet	
			Fine sand: with silt, grades into silty gravel with clay at 17 feet: fine 80%, coarse 20% rounded; (brown) damp	
			(brown) damp	
				Size
-20-	0.0			レノノノ
				Sand
	:			
-25-	0.0	CL	Silty clay with gravel: brown, medium high plasticity, damp, minor mottling, (green, gray and black), 5 to 10% fine rounded gravel	//// 4
			black), 5 to 10% fine rounded gravel	ig ////
				Size
			Silter along saith and a silter	Slot
-30-	0.0		Silty clay with gravel: brown, medium high plasticity, damp, minor mottling, (green, gray and black); 5 to 10% fine rounded gravel, grades into	ν//// σ
	⊈		fine_sandy clay grades into	
	ŧ	GP	Sandy gravel: saturated; gravel: fine rounded; sand: coarse, rounded, brown	
<del>  </del>	,		sand coarse, rounded, brown	////1
.   05			Sandy gravel with clay: saturated; gravel: fine	in .
35	0.0		rounded; sand: coarse, rounded, brown, damp	Diameter
			Gravely sand with clay: brown, damp, sand fine, gravel rounded	Ian I
<b>  </b>			Grades into silty clay brown dry to do-	Casing
40-	0.0		Grades into silty clay, brown, dry to damp, medium plasticity, 5% fine gravel (rounded)	//// 8
FN: 2034GP7		<u> </u>		

		Project No.: 203403 Boring: GP7 Plate: 2	OF 2
ERI	MENTAL LUTIONS, INC.	Site: Former Exxon Service Station 7-0276 Date:	10/24/01
		Drill Contractor: Vironex	
Drill Rig: _6	600 <u>acopi</u>	obe Geologist: <u>John B. Bo</u> Bore Hole Diameter: <u>4"</u> Signature:	bbitt
Location: _	<u>9 feet west</u>	<u>t of east edge of planter</u> Registration: <u>R.G.</u>	4313
/ <u>w/</u> _	9 feet nort	h of south edge of planter Logged by: Jeff Hislon	<u> </u>
	STATE SEE SEE	// graveau and and	23. 2
	<del></del>		A SECTION ASSESSED.
		Silty clay with trace gravel: brown, dry to damp, medium plasticity, 5% fine gravel (rounded)	
	——————————————————————————————————————	Grades into clayey silt: medium plasticity	
45 0.0		drades into clayey sit. Medium plasticity	
		Grades into silt with clay with trace gravely deals	V · / · / · / · / ·
		Grades into silt with clay with trace gravel: dark gray, slightly moist, 5 to 10% fine gravel, no plasticity to low plasticity, refusal	and //// but
		processing to tow proceeding, religion	Grout: Portland
50 0.0			
		Total depth = 51 feet (refusal)	roon
<del>  -  </del>			<sup>5</sup>
			N N
			Size:
			ν σ
<u> </u>			San
			A
<b>-</b>			
			Size:
			Slot
<b>-</b>			
			٠. ت:
			nete
			Diameter:
			Casing
EN: 2034GP7a			



### **APPENDIX D**

## SUMMARY OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES FROM SOIL BORINGS

#### TABLE 2 ANALYTICAL LABORATORY RESULTS OF GRAB

### GROUNDWATER SAMPLES

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 1 of 1)

Sample ID	Date	Sample Depth	TEPHd	TPPHg	MTBE	В	T	Е	X
	Collected	(ft bgs)	<	<u></u>		ug/L			>
W-5-B15	06/09/00	5	74	55	62/93*	0.97	1.1	1.6	5.1
W-4-B17	06/09/00	4	< 50	< 50	<2	<0.5	< 0.5	0.61	3.6
Notes:	<del></del>			<del></del>					
W-5-B15	=	Water sample -	depth - boring nu	ımber.					
			<u>F</u>						
TPPHg	=	Total purgeable			ine analyzed usir	ng EPA Method	8015 (modified)	/8020 (modified)	).
TPPHg TEPHd	=		petroleum hydro	carbons as gasol				/8020 (modified)	).
-		Total purgeable	petroleum hydro petroleum hydr	carbons as gasol ocarbons as dies	el analyzed using	EPA Method 8	015 (modified).	/8020 (modified)	).
TEPHd	=	Total purgeable Total extractable	petroleum hydro e petroleum hydr e, ethylbenzene,	carbons as gasol ocarbons as dies and total xylenes	el analyzed using s analyzed using	EPA Method 8	015 (modified).	/8020 (modified)	).
TEPHd BTEX MTBE	=	Total purgeable Total extractable Benzene, toluene	petroleum hydro e petroleum hydr e, ethylbenzene, butyl ether analy:	carbons as gasol ocarbons as dies and total xylenes	el analyzed using s analyzed using	EPA Method 8	015 (modified).	/8020 (modified)	).
TEPHd BTEX	# # =	Total purgeable Total extractable Benzene, toluene Methyl tertiary i	petroleum hydro e petroleum hydr e, ethylbenzene, butyl ether analy: nd surface.	carbons as gasol ocarbons as dies and total xylenes	el analyzed using s analyzed using	EPA Method 8	015 (modified).	/8020 (modified)	).
TEPHd BTEX MTBE ft bgs	= = =	Total purgeable Total extractable Benzene, toluene Methyl tertiary i Feet below grou	petroleum hydro e petroleum hydr e, ethylbenzene, butyl ether analy: nd surface. lot analyzed.	carbons as gasol ocarbons as dies and total xylenes zed using EPA N	el analyzed using s analyzed using Method 8021B.	g EPA Method 8 EPA Method 80	015 (modified).	/8020 (modified)	).
TEPHd BTEX MTBE ft bgs	= = = =	Total purgeable Total extractable Benzene, toluene Methyl tertiary I Feet below grou Not measured/N	petroleum hydro e petroleum hydr e, ethylbenzene, butyl ether analyz nd surface. fot analyzed. or above the state	carbons as gasol ocarbons as dies and total xylenes zed using EPA N	el analyzed using s analyzed using Method 8021B.	g EPA Method 8 EPA Method 80	015 (modified).	/8020 (modified)	).

## TABLE 3 Analytical Laboratory Results of Groundwater Samples Exxon Service Station 7-0276 1400 Farmers Lane

Santa Rosa, California (Page 1 of 1)

		Sample Depth (bgs)	TPHd	TPHg	MTBE	В	T	E	X	TAME	ETBE	DIPE	TBA	1,2-DCA	EDB
Sample ID	Sample Date	<>	<	······	<u></u>				ug/L						>
WGP1-7	10/22/01	. 7	< 83	< 50	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<1.0	<1.0	< 1.0	< 20	2.0	< 1.0
WGP1-21	10/22/01	21	< 67	< 50	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<1.0	<1.0	< 1.0	< 20	<1.0	< 1.0
WGP2-11	10/22/01	11	< 59	< 50	<1.0	0.75/<0.50a	< 0.50	< 0.50	< 0.50	< 1.0	<1.0	<1.0	< 20	3.0	< 1.0
WGP3-5	10/23/01	5	< 150	< 50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 20	< 1.0	<1.0
WGP3-20	10/23/01	20	<79	< 50	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	<1.0	< 20	<1.0	< 1.0
WGP4-5	10/24/01	5	190ь	2000 d	< 10	43/30a	1.9/<10a	3.5/<10a	3.5/<20a	< 10	<10	<10	< 100	< 10	< 10
WGP5-5	10/24/01	5	150b	2200 d	<20	220/200a	260/240a	79/58a	330260a	< 20	< 20	< 20	< 200	<20	< 20
WGP5-21	10/24/01	21	< 55	1200 d	<10	140/170a	69/78a	54/79a	95/120a	<10	< 10	< 10	< 100	< 10	< 10
WGP6-6	10/23/01	6	<57	160 d	<1.0	27/30a	3/3.1a	16/19a	25/28a	<1.0	<1.0	< 1.0	23	2.6	< 1.0
WGP6-21	10/23/01	21	< 58	< 50	<1.0	1.3/1.3a	< 0.50	0.62/<1.0a	< 0.50	<1.0	< 1.0	<1.0	< 20	< 1.0	< 1.0
WGP7-31	10/24/01	31	70ь	< 50	<2.0	< 0.50	< 0.50	< 0.50	< 0.50	<2.0	<2.0	< 2.0	< 20	< 2.0	<2.0
WGP8-18	10/25/01	18	210b	920	36	< 0.50	1.8/5.0a	31/39a	91/100a	< 4.0	<4.0	<4.0	< 40	<4.0	<4.0
WGP8-32	10/25/01	31	82b	370	9.0	< 0.50	1.1/2.6a	14/20a	54/67a	< 2.0	< 2.0	< 2.0	< 20	<2.0	< 2.0
tanding Water	10/23/01	surface	< 56	< 50	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<1.0	<1.0	<1.0	< 20	<1.0	<1.0
WB-18c	12/18/01	2.5	220	1,400	7	120	3.9	180	11		Par.				

ug/L	=	Micrograms per liter.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015 with silca gel cleanup.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015.
MTBE	=	MTBE analyzed using EPA Method 8260B.
BTEX	FF	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
ETBE	=	Ethyl tertiary buryl ether analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-Dichloroethene analyzed using EPA Method 8260B.
EDB	=	Ethylene dibromide analyzed using EPA Method 8260B.
<	=	Less than the stated laboratory method reporting limit.
	=	Not sampled.
bgs	=	Below ground surface.
a	==	BTEX analyzed using EPA Method 8260B.
ъ	=	Detected results for Diesel Range Organics; however, laboratory indicates that chromatogram patterns do not resemble a diesel pattern.
С	=	Sample invertantly mis-labeled in the field.
đ	=	Hydrocarbon pattern is present in the requested fuel quantification range but dose not resemble the pattern for the requested fuel.

Notes:

### TABLE 4 Analytical Laboratory Results of Groundwater Samples for Additional VOCs Exxon Service Station 7-0276

1400 Farmers Lane Santa Rosa, California (Page 1 of 1)

Sample ID	Sample Date	Sample Depth (bgs)	Napthalene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,2,4-Trichlorobenzene	Isopropylbezene	n-Propylbezene	n-Butylbenzene
Sample 10	Sample Date	<>	<			ug/L			>
WGP1-7	10/22/01	7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0
WGP1-21	10/22/01	21	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0
WGP2-11	10/22/01	11	<1.0	<1.0	<1.0	< 1.0	<1.0	<1.0	<1.0
WGP3-5	10/23/01	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
WGP3-20	10/23/01	20	< 1.0	<1.0	<1.0	< 1.0	<1.0	<1.0	<1.0
WGP4-5	10/24/01	5	<25	<10	< 10	<10	< 10	< 10	< 10
WGP5-5	10/24/01	5	<50	26	< 20	<20	< 20	<20	< 20
WGP5-21	10/24/01	21	<25	14	<10	< 10	13	10	< 10
WGP6-6	10/23/01	6	1.5	1.2	< 1.0	<1.0	<1.0	<1.0	< 1.0
WGP6-21	10/23/01	21	<1.0	<1.0	<1.0	<1.0	< 1.0	<1.0	<1.0
WGP7-31	10/24/01	31	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0
WGP8-18	10/25/01	18	< 10	68	20	<4.0	5.9	10	5,4
WGP8-32	10/25/01	31	<5.0	<2.0	10.0	34	2.9	4.1	2.4
Standing Water	10/23/01	surface	<1.0	<1.0	<1.0	< 1.0	< 1.0	<1.0	<1.0

ug/Ĺ	=	Micrograms per liter.
Napthalene	×	Napthalene analyzed using EPA Method 8260B.
1,2,4-Trimethylbenzene	=	1,2,4-Trimethylbenzene analyzed using EPA Method 8260B.
1,3,5-Trimethylbenzene	=	1,3,5-Trimethylbenzene analyzed using EPA Method 8260B.
1,2,4-Trichlorobenzene	=	1,2,4-Trichlorobenzene analyzed using EPA Method 8260B.
Isopropylbezene	=	Isopropylbezene analyzed using EPA Method 8260B.
n-Propylbezene	=	n-Propylbezene analyzed using EPA Method 8260B.
n-Butylbenzene	-	N-Butylbenzene analyzed using EPA Method 8260B.
<	=	Less than the stated laboratory method reporting limit.
	=	Not sampled.
bgs	-	Below ground surface.

### TABLE 2 Analytical Laboratory Results of Groundwater Samples Collected from Soil Borings

Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 1 of 1)

O In ID	Sa-la Data	Sample Depth (bgs)	TPHd	TPHg	MTBE	В	T	Е	X
Sample ID	Sample Date	<	<			ug/L		······	
W-32-MW17	10/1/2003	32	160	<50.0	1.4/2.00a	<0.50	<0.5	0.7	3.2
W-36-MW16	10/2/2003	36	<50	312	11.5/19.0a	<0.50	8.5	11.4	60.7
Notes:		<del>- · ,</del>					· · · · · · · · · · · · · · · · · · ·	•	
W-36-MW16	=	Water sample-depth in fe	et below grour	d surface mor	itoring well num	ber.			
ug/L	=	Micrograms per liter.							
TPHd	=	Total petroleum hydrocar	bons as diesel	analyzed usin	g EPA Method 80	015B.			
TPHg	=	Total petroleum hydrocar	bons as gasoli:	ne analyzed us	ing EPA Method	8015B.			
MTBE	=	MTBE analyzed using EF	A Method 802	21B.	•				
BTEX	=	Benzene, toluene, ethylbe	nzene, and tot	al xylenes ana	lyzed using EPA	Method 80211	3.		
<	=	Less than the stated labor	ratory method	reporting limit	<u>.</u> ,				
bgs	=	Below ground surface.							
a	=	MTBE confirmed using B	PA Method 82	.60B.					

# APPENDIX E DISSOLVED-PHASE MASS CALCULATIONS

Using the results of the December 15, 2004 monitoring and sampling event, ERI calculated the estimated mass of dissolved TPHd, TPHg, Benzene, and MTBE in the on-site plume and off-site plume.

For the on-site plume, ERI calculated the volume of water impacted by each constituent. To calculate the volume of water in the on-site plume, ERI assumed a porosity of 35% and used a depth of 25 feet (the distance from the average depth to water to the finer grained sediments that provides a limiting barrier between monitoring wells screened in first encountered groundwater and the wells screened in the deeper sediments). Using the isoconcentration maps of dissolved TPHd, TPHg, Benzene, and MTBE, ERI then calculated the average concentration within the areas defined by the isoconcentration contours, which is considered the representative concentration. The mass of dissolved TPHd, TPHg, Benzene, and MTBE within each contour interval was calculated by multiplying the representative concentration by the volume of water within the contour interval. The total mass in the on-site plume was calculated by summing the calculated masses within each contour interval.

For the off-site plume, ERI used the same procedure for the on-site plume expect to calculate the volume of water in the off-site plume, ERI conservatively estimated that the offsite plume covers an area of 1000 sq feet and assumed a porosity of 35% and depth 25 feet. Also, for the off-site plume calculation, ERI used the concentration of dissolved TPHd, TPHg, Benzene, and MTBE in well MW10 during the December 15, 2004 monitoring and sampling event as the representative concentration.

### TABLE E-1 DISSOLVED PHASE COC MASS CALCULATIONS

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page | of 1)

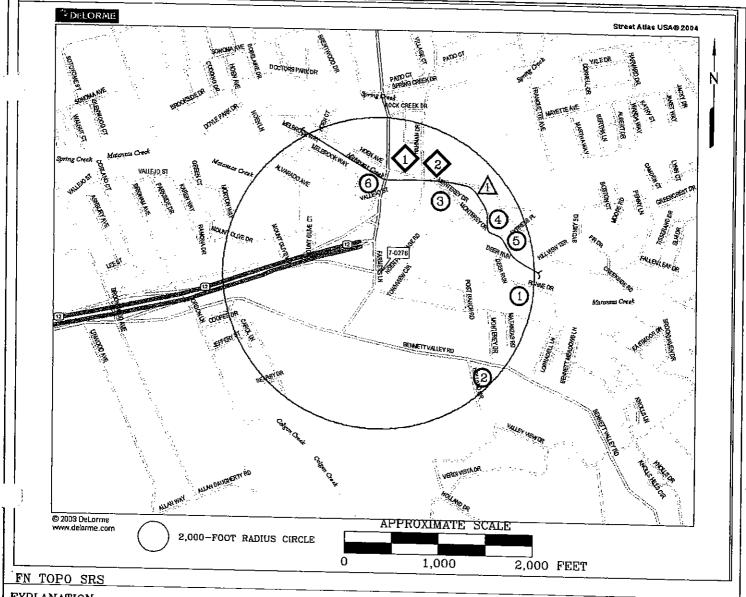
	Range of Contour Interval	Length * Width*Depth*Porosity	Volume	Area	Water Concentrations in Area	Representative Concentration	Mass in Pounds	Mass in ma
On-site Plume			<del></del>					
грна	> 1000	12*18*25*.35	1890	216	1100 +1000	1050	0.123591513	56060.17
rnu	100-1000	125*90*25*,35	96548	11250	1000+100	550	3.307053852	1500054,39
	10-100	160*230*25*,35	223562.50	36800	100+100	55	0.765771487	347348.10
	10-10	180*240*25*,35	56000.00	43200	10+1	6	0.019181752	8700.70
	10-1	180-240-23-,33	30000.00	43200	10+1	•	4.22	1912163.36
PHg	>1000	40*45*25*,35	15750.00	1800	4380+1000	2690	2,638580709	1196840.08
rng	100-1000	115*85*25*.35	69781,25	9775	1000+1000	550	2.390226071	1084188.31
	10-100	120*120*25*,35	40468.75	14400	100+10	55	0.136618126	62876.12
	10-L	170*145*25*.35	89687.50	24650	10+1	6	0.030720774	13934.71
		170 170 20 100	0,00,1,00	21000	3371	ŭ	5.20	2357839.22
ПВЕ	> 100	125*40*25*,35	43750.00	5000	116+100	108	0,294265507	133476.59
	10-100	130*60*25*.35	24500.00	7800	100+10	55	0.083920163	38065.55
	1-10	180+120+25+,35	120750,00	21600	10+1	6	0.041360652	18760.88
	· ·					_	0.42	190303.01
enzene	> 10	60*50*25*.35	26250.00	3000	86+10	48	0.078470802	35593,76
	10-1	130*90*25*.35	76125.00	11700	10+1	6	0.026075194	11827-51
							0.10	47421.27
Off-site Plume	· · · -				·			
РНа		(0°100°25°.35	31500	3600	982	982	1.926458183	873826.73
РНц		10*100*25*.35	31500	3600	9120	9120	17.8913428	8115376.58
ITBE	<del></del>	10*100*25*.35	31500	3600	9	8	0.015890337	7207.74
enzene	<del></del>	10*100*25*.35	31500	3600	705	705	1.383047881	627339.97

Not≃s:

шу/Ка

Milligrams per kilogram.

# APPENDIX F RESULTS OF SENSITIVE RECEPTOR SURVEYS



### EXPLANATION

WATER WELLS 1690 Ronne Dr. (1,905 Ft.)

- ② 3356 Holland Dr. (1,818 Ft.)
- 31423 Monterey Dr. (1,300 Ft.)
- 4 3308 Cypress Way (1,732 Ft.)
- (1,818 Ft.)
- 6 2455 Melbrook Way (1,125 Ft.)

### SENSITIVE RECEPTORS

SURFACE WATER

⚠ Matanzas Creek (1,386 Ft.)

SCH00LS

Daycare 2495 Hoen Ave. (1,386 Ft.)

Montgomery High School 1260 Hannan Dr. (1,472 Ft.)

**HOSPITALS** 1 None

NEAREST BASEMENT

↑ None



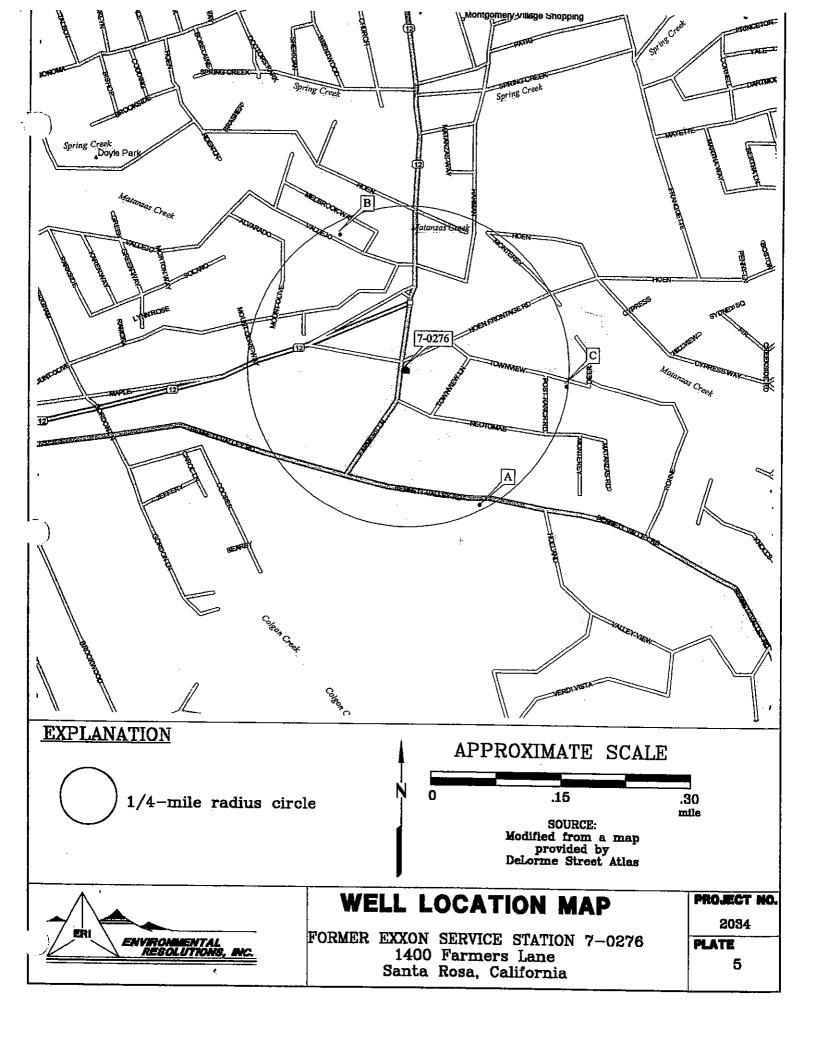
### SENSITIVE RECEPTOR MAP

FORMER EXXON SERVICE STATION 7-0276 1400 Farmers Lane Santa Rosa, California

PROJECT NO.

2034

PLATE 1



### TABLE 3 Water Well Survey Results

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California

(Page 1 of 3)

Map ID	Well ID	Address	Year Drilled	Total Depth	Distance to Site	Use	Status	Field Information
Information	obtained fro	m the DWR.						•
	49-1840	2701 Bennett Valley Road	1952	200	N/A	Domestic	N/A	Unable to Locate Property
A	113288	2938 Bennett Valley Road	1966	135	1,275	Domestic	Active	Well located
	49-1839	2951 Bennett Valley Road	1950	113	N/A	Domestic	N/A	Unable to Locate Property
	45537	1349 Hahman Drive	1957	46	N/A	Domestic	Abandoned	Property Located, connected to City Wat
	23690	2332 Hoen Avenue	1956	80	N/A	Domestic	N/A	Unable to Locate Property
,	23699	2332 Hoen Avenue	1956	80	N/A	Domestic	N/A	Unable to Locate Property
	49-1688	2457 Hoen Avenue	1950	102	N/A	Domestic	N/A	Unable to Locate Property
	23784	3052 Hoen Avenue	1957	72	N/A	Domestic	N/A	Unable to Locate Property
	49-1838	3090 Hoen Avenue	1951	136	N/A	Domestic	N/A	Unable to Locate Property
	3840	3098 Hoen Avenue	1954	60	N/A	Domestic	N/A	Unable to Locate Property
Information	obtained from	n the City of Santa Rosa Utility Billing	Accounts with Wells	List.				
		2973 Bennett Valley Road	N/A	N/A	N/A	Domestic	N/A	Unable to Locate well
Ď		2254 Hoen Avenue	N/A	N/A	N/A	N/A	N/A	Unable to Locate Property
		2455 Melbrook Way	N/A	N/A	N/A	N/A	Abandoned	Unable to Locate Property
В		2419 Vallejo Street	N/A	N/A	1,250	Domestic	Active	Property Located, residence

### TABLE 3 Water Well Survey Results

Former Exxon Service Station 7-0276 1400 Farmers Lane Santa Rosa, California (Page 2 of 3)

Map ID	Well ID	Address	Year Drilled	Total Depth	Distance to Site	Use	Status	Field Information
Addresses no	ot listed on th	e City of Santa Rosa Utility Billing A	Accounts List.	<del>`-</del>				
		2455 Bennett Valley Road					No wells observed	Unable to Locate Property
		2670 Bennett Valley Road					No wells observed	Unable to Locate Property
		2930 Bennett Valley Road					No wells observed	Unable to Locate Property
		1400 Farmers Lane					No wells observed	Service Station connected to City Water
		1416 Farmers Lane				•	No wells observed	Commercial connected to City Water
		1460 Farmers Lane					No wells observed	Commercial connected to City Water
		1500 Farmers Lane					No wells observed	Commercial connected to City Water
		1513 Farmers Lane					No wells observed	Commercial connected to City Water
		2367 Hoen Avenue					No wells observed	Unable to Locate Property
		2457 Hoen Avenue					No wells observed	Unable to Locate Property
		2495 Hoen Avenue					No wells observed	Property Located, private residence
		2550 Hoen Avenue			•		No wells observed	Unable to Locate Property
		2138 Mount Olive Court					No wells observed	Unable to Locate Property
E		2101 Mount Olive Drive	•				No wells observed	Unable to Locate Property
		2072 Mount Olive Way	Tenant response, no	wells			No wells observed	Private residence connected to City Wate
		2074 Mount Olive Way					No wells observed	Property Located, private residence

#### TABLE 3

### Water Well Survey Results

Former Exxon Service Station 7-0276

1400 Farmers Lane

Santa Rosa, California

(Page 3 of 3)

Map ID	Well ID	Address	Year Drilled	Total Depth	Distance to Site	Use	Status	Field Information
		2076 Mount Olive Way		-			No wells observed	Property Located, private residence
		2078 Mount Olive Way	•				No wells observed	Property Located, private residence
		1416 Townview Avenue					No wells observed	Unable to Locate Property
		1420 Townview Avenue					No wells observed	Unable to Locate Property
		1432 Townview Avenue					No wells observed	Unable to Locate Property
C, f		1450-1478 Townview Avenue 1488-1492 Townview Avenue	N/A	N/A	1,300	Domestic	N/A	Property Located Townhouse sub-division
		1400, 1416, 1426 Townview Lane					No wells observed	Commercial connected to City Water
		1440 Townview Lane					No wells observed	Commercial connected to City Water
		1460 Townview Lane					No wells observed	Unable to Locate Property
		2460 Vallejo Street	Tenant response	, no wells			No wells observed	Property Located, residence
otes:					<u> </u>	· · · · · · · · · · · · · · · · · · ·		·-···
NA	lesignation co =	orresponds to approximate location depict Not available	ed on Plate 5.					
A,B,C	=	Symbol representing well on Plate 5.						

Well information provided by:

D

E

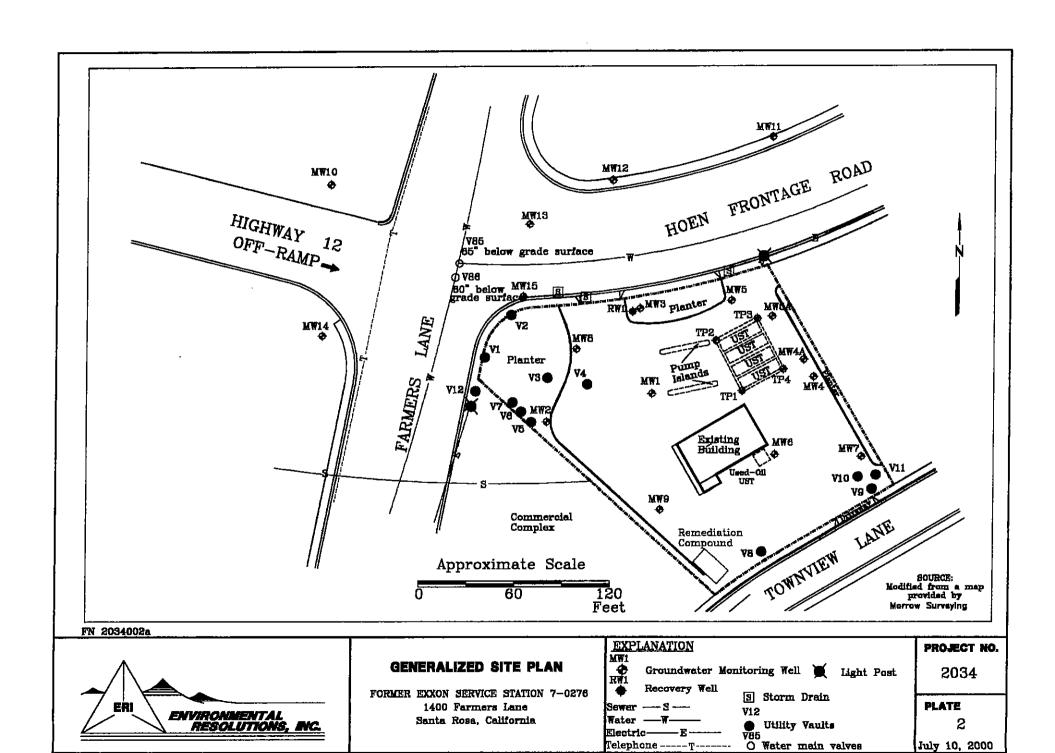
Department of Water Resources (DWR). Records located at DWR Central District 3251 S. Street, Sacramento, CA, 95816-7017

City of Santa Rosa - Water Division City of Santa Rosa - Public Works

All depths and distances are measured in feet.

Abandoned well on 2455 Hoen Avenue.

Possible domestic well house on 2103 Hoen Avenue. One main domestic well for entire sub-division.



Telephone ----- T-

July 10, 2000

## APPENDIX G REGULATORY CRITERIA

TABLE 2-1: BENEFICIAL USES OF SURFACE WATERS OF THE NORTH COAST REGION

,,,,,	HYDROLOGIC UNIT/AREA/SUBUNIT/ DRAINAGE FEATURE	BENEFICIAL USES																									
HU/HA/ HSA		<b>V</b>	AGR	₽	PRO	GWR	FRBH	MAV	POW	RECT	REC2	COMM	WARM	COLD	BSA	SAL	Q.M.	RARE	HAR	MIGR	NWAS	SHELL	EST	AGUA	705	깺	WET
.60	Pt Arena Hydrologic Area		-,																	_	-		1_	T <sub>D</sub>			_
	Greenwood Creek Hydrologic Subarea	Е	E	E	P	E	ĮΕ	E	Р	E	E	E_		E.,	ļ		E	<u>E_</u>		<u> </u>	<u>E.</u>	4—	E	P	JI		<u> </u>
	Elk Creek Hydrologic Subarea	Р	Ρ.	E	ρ	E	E	E	P	E	E	Ę_	┷	E	<b>_</b>	٠.,	E	E	_		E	+	E	P	1	$\dashv$	⊢
	Alder Creek Hydrologic Subarea	Ε	E	Æ	P	E	E	E'	Р	E	E	Ē	<del></del> _	E	₩	<u> </u>	<u>E</u>	E		<u> </u>	Ε.	<del> </del> -	E	P	<del>  </del>		├─-
	Brush Creek Hydrologic Subarea	Ĕ	E	Ē	įΡ	Ę_	<u>E.</u>	E	P	E	E	E		E	,		E	E			E		E	٩			
.70	Garcia River Hydrologic Area	Ę	E E	E	P		E	E	P	Ē	E	Ę	1	Ë			E	E		E E	E		E	P			
				184	1. 1.7	312 L.	11 / C.		-2.		40000	0.1260		X2 X.			1.61.27	Si. 11.6	41, 41		A 110			111 1909	8-21 No. 11		
	Gualala River Hydrologic Area	-	T= -		10	I= -	1-	Te:	lo.	7=	TE -	Te -	т —	ΙĒ	1	Υ	lc	E	- 1	=	E	1	т-	E	1	$\neg \neg$	
	North Fork Gualala Hydrologic Subarea	ᄩ	E	<u> </u>	<del>-  </del>	E	<del>- =</del>	늗	P	<del>-</del>	E	<del>Ĕ</del>	ŧ	늗	╁	+-	<del> </del>	1	-	<u> </u>	Ē	<del>  -</del> -	E	Ē		$\dashv$	
	Rockpile Creek Hydrologic Subarea	E	E	E	P	E	+	퉅	P	E	퉅	<u> </u>	<del>-  </del>	Ē	-	<del> </del>	Ē	Ē	<del>-  </del> ;		Ē	-	†	P		-+	
	Buckeye Creek Hydrologic Subarea	E	E	E	P	냩	+-	듄	<del> </del> -	E	녙	Ē	E	E	<del> </del>	$\vdash$	Ē	Ē		_	Ē	+	1	P	П	$\dashv$	
	Wheatfield Fork Hydrologic Subarea		E	E	P	Ē	+=-	E	P	Ē	E	E	Ē	Ē	2	_	Ē	Ē			Ε	1	1	P	<del>                                     </del>	$\dashv$	_
.85	Gualala Hydrologic Subarea	Ε	E					, E		-	بويتان			المتنا	حواقا	ويتك						تزرين	4	in a		نجير	
90	Russian Guich Hydrologic Area	E	E	E	P	E				Е	E	Ρ		Ε		E	E		)E	```	E			Ë			
.00 [	Russian River Hydrologic Unit	T																									
	Lower Russian River Hydrologic Area	<del> </del>				_			•																		
	Guerneville Hydrologic Subarea	<del> </del>	ΙĖ	ΊE	ΙP	E	TE	TE	ΤΕ	ΙE	ĪΕ	IE.	Ē	E	Ē	1	E	E	<u>[</u>		Ę	$T^{T}$	É	Р		T	
	Austin Creek Hydrologic Subarea	돝	Ē	Ē	P	냩一	+	Æ	E	ΙE	E	IE.	ΙE	E			E	E.	E	1	E	1	Г	P		$\neg$	
12	Adeliti Cleak Hydrologic Salatrea		-	. 7 ' 9	100	A Second			100	. 9	1	700	5.0033		<b>33.3</b>						100	J. 30					
20 I	Middle Russian River Hydrologic Area	<del>' ' ' '</del>			1	No. 100 Per																					
	Laguna Hydrologic Subarea	Р	ΤE	ΤE	TP	ΙE	E	ΤÉ	P	ΤE	TE	E	E	E	Ī		E	E	E	: . I	Ę	P		Р			
	Senta Rosa Hydrologic Subarea	Ė	Ē	Ē	Р	İΕ	-	E	Р	E	E	Ē	E	E	Ε		E 1	Ε	E		ш	Ρ		P			
	Mark West Hydrologic Subarea	E	E	E	P	E	E	ΪĒ	Р	Е	E	E	E	E			珦	E	[		E	P		٥			
	Warm Springs Hydrologic Subarea	E	E	E	Р	E	E	E	E	E	E	Ε	E	Ε.	Ε		E	ш	, E		E			E			
	Geyserville Hydrologic Subarea	E	Ē	TE.	٥	Έ	Е	E	P	E	É	E	Ε.	E			E	E			E	Р		Р			
	Sulphur Creek Hydrologic Subarea	ΪE	E	E	P	E	T	E	P	E	E	E	E	E			E	Ē	E		E			P.			
					2000				بعدينة	, 1940 i			راه در از در در از در از در از در د	34 A			<u> </u>		100			15 %	Con-	A	(4) h		
30 K	Jpper Russian River Hydrologic Area															<del></del>					_	r				<u> </u>	
31 l	Jkish Hydrologic Subarea	E	E	E	P	E	<u>}∈</u>	E	Р	E	<u>JE</u>	٤	E	E.				트			<u> </u>	Р		Р	<del></del>		
	Coyote Valley Hydrologic Subarea	E	Ш	E	Р	E	E	E	Е	E	E .	E	E	E				E	E	<u> </u>	<u> </u>	<u> </u>	Ii	P		$\dashv$	
	Forsythe Creek Hydrologic Subaree	È	E	Е	P	Ė	<u> </u>	Ε	P	E	E	E	£	E			Ë	E	ĮΕ		E _			P			
00 (E	Bodega Hydrologic Unit	_		-																							
	Salmon Creek Hydrologic Area	E	E	E	Р	E	Ι	E		Е	E	E		E	ш		Ĕ.	E	E		<u> </u>	Р	E.	P		_	
	Bodega Herbor (or Bay) Hydrologic Area	E	E	E	P	Ε		E		E		É		Ę	ш		E				E	E		Ë			
	estero Americano Hydrologic Area	E	E	E	ŀP.	٤		E		Ε.	E	E		E			E	E	<u> </u>		<u> </u>	P		P		_	
	atero de San Antonio Hydrologic Area	E	E	Е	Ρ	E		E		E	E	E		E			E	E _  I	Ę	l	E	Р	E	P			
_ · A	/finor Coastal Streams (not listed above**)	E	Ρ	P	Р	P	P	P	,	Ρ	Ρ	E	Р	Ρ	P		E	Ē F	P		P		Ħ	P I	P		
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TABLE 3-2
INORGANIC, ORGANIC, AND FLUORIDE CONCENTRATIONS NOT TO BE EXCEEDED IN DOMESTIC OR MUNICIPAL SUPPLY 1, 2

Constituent	LIMITING ( Lower	ONCENTRAT Optimum		IGRAMS PER LITER Maximum Contaminant Level, mg/L
Fluoride <sup>3</sup>				
53.7 and below 53.8 to 58.3 58.4 to 63.8 63.9 to 70.6 70.7 to 79.2 79.3 to 90.5	0.8 0.8 0.7 0.7 0.6	1.2 1.1 1.0 0.9 0.8 0.7	1.7 1.5 1.3 1.2 1.0 0.8	2.4 2.2 2.0 1.8 1.6 1.4
Inorganic Chemic	als			
* Aluminum Arsenic Barium Cadmium Chromium Lead Mercury Nitrate-N (as N	VO₃ )			1.0 0.05 1.0 0.01 0.05 0.05 0.002 45 0.01 0.05
Organic Chemica	ıls			
(a) Chlorinated Hy Endrin Lindane Methoxychl Toxaphene	or			0.0002 0.004 0.1 0.005
(b) Chlorophenox 2,4-D 2,4,5-TP (S	•			0.1 0.01
(c) Synthetics Atrazine Bentazon Benzene Carbon Tet Carbofuran Chlordane				0.003 0.018 0.001 0.0005 0.018 0.0001

#### TABLE 3-2 (CONTINUED)

# INORGANIC, ORGANIC, AND FLUORIDE CONCENTRATIONS NOT TO BE EXCEEDED IN DOMESTIC OR MUNICIPAL SUPPLY 1, 2

# LIMITING CONCENTRATION IN MILLIGRAMS PER LITER Maximum Contaminant

Constituent	Maximum Contaminan Level, mg/L
(c) Synthetics (cont'd.)	
1,2-Dibromo-3-chloropropane	0.0002
1,4-Dichlorobenzene	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane	0.0005
cis-1,2-Dichloroethylene	0.006
trans-1,2-Dichloroethylene	0.01
1,1-Dichloroethylene	0.006
1,2-Dichloropropane	0.005
1,3-Dichloropropene	0.0005
Di(2-ethylhexyl)phthalate	0.004
* Ethylbenzene	0.680
Ethylene Dibromide	0.00002
Glyphosate	0.7
Heptachlor	0.00001
Heptachlor epoxide	0.00001
Molinate	0.02
Monochlorobenzene	0.030
Simazine	0.010
1,1,2,2-Tetrachloroethane	0.001
Tetrachloroethylene	0.005
* Thiobencarb	0.07
1,↑,1-Trichloroethane	0.200
1,1,2-Trichloroethane	0.032
Trichloroethylene	0.005
Trichlorofluoromethane	0.15
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2
Vinyl Chloride	0.0005
* Xylenes <sup>4</sup>	1.750

Values included in this table have been summarized from California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Sections 64435 (Tables 2 and 3) and 64444.5 (Table 5).

Constituent

The values included in this table are maximum contaminant levels for the purposes of groundwater and surface water discharges and cleanup. Other water quality objectives (e.g., taste and odor thresholds or other secondary MCLs) and policies (e.g., State Water Board "Policy With Respect to Maintaining High Quality Waters in California") that are more stringent may apply.

Annual Average of Maximum Daily Air Temperature, °F Based on temperature data obtained for a minimum of five years. The average concentration of fluoride during any month, if added, shall not exceed the upper concentration. Naturally occurring fluoride concentration shall not exceed the maximum contaminant level.

Maximum Contaminant Level is for either a single isomer or the sum of the isomers.

<sup>\*</sup> Constituents marked with an \* also have taste and odor thresholds that are more stringent than the MCL listed. Taste and odor thresholds have also been developed for other constituents not listed in this table.

## **APPENDIX H**

# LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD



6 January, 2005

Rob Saur Environmental Resolutions (Exxon) 601 North McDowell Blvd. Petaluma, CA 94954 JAN 10 2005

RE: Former Exxon 7-0276 Work Order: MNL0521

Enclosed are the results of analyses for samples received by the laboratory on 12/16/04 17:35. The samples arrived at a temperature of 5 C. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Leticia Reyes Project Manager

CA ELAP Certificate #1210

Leticio Rys





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW2	MNL0521-01	Water	12/15/04 17:50	12/16/04 17:35
MW3	MNL0521-02	Water	12/15/04 18:40	12/16/04 17:35
MW4	MNL0521-03	Water	12/15/04 17:20	12/16/04 17:35
MW5	MNL0521-04	Water	12/15/04 18:20	12/16/04 17:35
MW8	MNL0521-05	Water	12/15/04 18:10	12/16/04 17:35
MW10	MNL0521-06	Water	12/15/04 12:05	12/16/04 17:35
MW12	MNL0521-07	Water	12/15/04 13:50	12/16/04 17:35
MW14	MNL0521-08	Water	12/15/04 15:00	12/16/04 17:35
MW15	MNL0521-09	Water	12/15/04 19:00	12/16/04 17:35





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

## Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (MNL0521-01) Water	Sampled: 12/15/04 17:50	Received:	12/16/04	17:35					
Ammonia as N	ND	0.25	mg/l	1	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	1.1	1.0	н	(r	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	1.1	0.10	U	**	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.17	0.010	п	11	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.36	0.010	п	II	4L30010	12/29/04	12/29/04	EPA 365,3	
Total Dissolved Solids	440	10	н	Ħ	4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	ND	1.0	n	n	4L21017	12/18/04	12/18/04	EPA 376.1	
MW3 (MNL0521-02) Water	Sampled: 12/15/04 18:40	Received:	12/16/04	17:35					
Ammonia as N	ND	0.25	mg/l	1	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	1.2	1.0	11	н	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	0.42	0.10	¥F	н	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.12	0.010	π	II .	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.35	0.010	II .	н	4L30010	12/29/04	12/29/04	EPA 365.3	
Total Dissolved Solids	400	10	IT	II .	4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	ND	1.0	19	u	4L21017	12/18/04	12/18/04	EPA 376.1	
MW4 (MNL0521-03) Water	Sampled: 12/15/04 17:20	Received:	12/16/04	17:35					
Ammonia as N	ND	0.25	mg/l	I	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	1.8	1.0	н	n	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	1.8	0.10	Ħ	19	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.28	0.010	*1	n	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.32	0.010	п	π	4L30010	12/29/04	12/29/04	EPA 365,3	
Total Dissolved Solids	330	10	"	II .	4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	ND	1.0		н	4L21017	12/18/04	12/18/04	EPA 376.1	





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

### Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW5 (MNL0521-04) Water	Sampled: 12/15/04 18:20	Received:	12/16/04	17:35					
Ammonia as N	ND	0.25	mg/l	I	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	ND	1.0	п	11	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	0.34	0.10	u	11	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.12	0.010	u	It	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.30	0.010	**	l <del>t</del>	4L30010	12/29/04	12/29/04	EPA 365.3	
Total Dissolved Solids	380	10	11		4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	1.9	1.0	11	н	4L21017	12/18/04	12/18/04	EPA 376.1	
MW8 (MNL0521-05) Water	Sampled: 12/15/04 18:10	Received:	12/16/04	17:35					
Ammonia as N	ND	0.25	mg/l	ı	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	1.1	1.0	Ħ	**	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	1.1	0.10	<b>#</b> 1	11	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.31	0.010	11	IF	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.35	0.010	Ħ	ij	4L30010	12/29/04	12/29/04	EPA 365.3	
Total Dissolved Solids	710	10	н	н	4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	ND	1.0	II	u	4L21017	12/18/04	12/18/04	EPA 376.1	
MW10 (MNL0521-06) Water	Sampled: 12/15/04 12:05	5 Received	: 12/16/0	4 17:35					
Ammonia as N	ND	0.25	mg/l	1	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	ND	1.0	H	II	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	0.30	0.10	п	н	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.29	0.010	н	н	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.32	0.010	n	**	4L30010	12/29/04	12/29/04	EPA 365.3	
Total Dissolved Solids	480	10	11	17	4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	ND	1.0	IF.	11	4L21017	12/18/04	12/18/04	EPA 376.1	





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

## Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW12 (MNL0521-07) Water	Sampled: 12/15/04 13:50	Received	: 12/16/04	17:35					
Ammonia as N	ND	0.25	mg/I	1	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	ND	1.0	11	h	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	0.82	0.10	h	1(	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.11	0.010	11	II	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.15	0.010	п	IF	4L30010	12/29/04	12/29/04	EPA 365.3	
Total Dissolved Solids	310	10	u	lt.	4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	ND	1.0	н	is	4L21017	12/18/04	12/18/04	EPA 376.1	
MW14 (MNL0521-08) Water	Sampled: 12/15/04 15:00	Received	: 12/16/04	17:35					
Ammonia as N	ND	0.25	mg/l	1	4L22031	12/22/04	12/22/04	EPA 350.1	
Nitrogen: Total	1.1	1.0	ur .	п	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	1.1	0.10	w	II	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	9.30	0.010	19	rı	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.26	0.010	41	ti	4L30010	12/29/04	12/29/04	EPA 365.3	
Total Dissolved Solids	370	10	n	71	4L21024	12/17/04	12/17/04	EPA 160.1	
Sulfide	ND ,	1.0	н	71	4L21017	12/18/04	12/18/04	EPA 376.1	
MW15 (MNL0521-09) Water	Sampled: 12/15/04 19:00	Received	: 12/16/04	17:35					
Ammonia as N	ND	0.25	mg/l	ı	4L22031	12/22/04	12/22/04	EPA 350.1	<del></del>
Nitrogen: Total	ND	1.0	n	II	5A06021	01/06/05	01/06/05	SM 4500-N	
Nitrite+Nitrate as N	0.37	0.10	П	н	4L29014	12/17/04	12/17/04	EPA 300.0	
Phosphate (Ortho) as P	0.14	0.010	47	н	4L20012	12/17/04	12/17/04	EPA 365.2	
Total Phosphorous	0.87	0.020	JE	2	4L30010	12/29/04	12/29/04	EPA 365.3	
Total Dissolved Solids	380	10	IT	1	4L21024	12/17/04	12/17/04	EPA 160,1	
Sulfide	ND	1.0	п	н	4L21017	12/18/04	12/18/04	EPA 376.1	





601 North McDowell Blvd.

Petaluma CA, 94954

Project: Former Exxon 7-0276

Project Number: 7-0276
Project Manager: Rob Saur

MNL0521 Reported: 01/06/05 17:08

## Anions by EPA Method 300.0 Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (MNL0521-01) Water	Sampled: 12/15/04 17:50	Received:	12/16/04	17:35				·	
Nitrate as NO3 Sulfate as SO4	3.3 25	0.50 5.0	mg/l	1 10	4L29014	12/17/04	12/17/04 12/17/04	EPA 300.0	
MW3 (MNL0521-02) Water	Sampled: 12/15/04 18:40	Received:	12/16/04	17:35		_			
Nitrate as NO3 Sulfate as SO4	ND <b>4.7</b>	0.50 0.50	mg/l	I n	4L29014	12/17/04	12/17/04	EPA 300.0	
MW4 (MNL0521-03) Water	Sampled: 12/15/04 17:20	Received:	12/16/04	17:35					
Nitrate as NO3 Sulfate as SO4 MW5 (MNL0521-04) Water	6.2 24 Sampled: 12/15/04 18:20	0.50 5.0 Received:	mg/l "	1 10	4L29014	12/17/04	12/17/04 12/17/04	EPA 300.0	-
Nitrate as NO3 Sulfate as SO4 MW8 (MNL0521-05) Water	ND 1.6	0.50 0.50 <b>Received:</b>	mg/l	1	4L29014	12/17/04	12/17/04	EPA 300.0	
Nitrate as NO3 Sulfate as SO4 MW10 (MNL0521-06) Water	3.0 17	0.50 0.50	mg/l	1	4L29014	12/17/04	12/17/04	EPA 300.0	
Nitrate as NO3 Sulfate as SO4 MW12 (MNL0521-07) Water	ND 19	0.50 0.50	mg/l	1	4L29014	12/17/04	12/17/04	EPA 300.0	HT-04
Nitrate as NO3 Sulfate as SO4	2.1 19	0.50 0.50	mg/l	1	4L29014	12/17/04	12/17/04	EPA 300.0	HT-03





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

MNL0521 Reported: 01/06/05 17:08

Project Number: 7-0276 Project Manager: Rob Saur

#### Anions by EPA Method 300.0 Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW14 (MNL0521-08) Water	Sampled: 12/15/04 15:00	Received	: 12/16/0	4 17:35				·	
Nitrate as NO3	2.8	0.50	mg/l	1	4L29014	12/17/04	12/17/04	EPA 300.0	HT-03
Sulfate as SO4	33	5.0	17	10	h	н	12/17/04	n	
MW15 (MNL0521-09) Water	Sampled: 12/15/04 19:00	Received	: 12/16/0	4 17:35					
Nitrate as NO3	ND	0.50	mg/l	1	4L29014	12/17/04	12/17/04	EPA 300.0	<del></del>
Sulfate as SO4	8.2	0.50	11	н	ìı	h	Ħ	n	





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

## Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (MNL0521-01) Water	Sampled: 12/15/04 17:50	Received:	12/16/04	17:35			· .	<del></del>	
Total Kjeldahl Nitrogen	ND	0.50	mg/l	I	4120512	12/27/04	12/29/04	EPA 351.2	
MW3 (MNL0521-02) Water	Sampled: 12/15/04 18:40	Received:	12/16/04	17:35					
Total Kjeldahl Nitrogen	0.76	0.50	mg/l	1	4120512	12/27/04	12/29/04	EPA 351.2	
MW4 (MNL0521-03) Water	Sampled: 12/15/04 17:20	Received:	12/16/04	17:35					
Total Kjeldahl Nitrogen	ND	0.50	mg/l	1	4120512	12/27/04	12/29/04	EPA 351.2	
MW5 (MNL0521-04) Water	Sampled: 12/15/04 18:20	Received:	12/16/04	17:35					
Total Kjeldahl Nitrogen	ND	0.50	mg/l	1	4120512	12/27/04	12/29/04	EPA 351.2	
MW8 (MNL0521-05) Water	Sampled: 12/15/04 18:10	Received:	12/16/04	17:35					
Total Kjeldahl Nitrogen	ND	0.50	mg/l	I	4120512	12/27/04	12/29/04	EPA 351.2	
MW10 (MNL0521-06) Water	Sampled: 12/15/04 12:05	Received	: 12/16/0	4 17:35					
Total Kjeldahl Nitrogen	ND	0.50	mg/l	1	4120512	12/27/04	12/29/04	EPA 351.2	
MW12 (MNL0521-07) Water	Sampled: 12/15/04 13:50	Received	: 12/16/0	4 17:35					
Total Kjeldahl Nitrogen	ND	0.50	mg/l	1	4120512	12/27/04	12/29/04	EPA 351.2	-
MW14 (MNL0521-08) Water	Sampled: 12/15/04 15:00	Received	: 12/16/0	4 17:35					
Total Kjeldahl Nitrogen	ND	0.50	mg/I	1	4120512	12/27/04	12/29/04	EPA 351.2	<del></del> -
MW15 (MNL0521-09) Water	Sampled: 12/15/04 19:00	Received	: 12/16/0	17:35					
Total Kjeldahl Nitrogen	ND	0.50	mg/l	1	4120512	12/27/04	12/29/04	EPA 351,2	





Environmental Resolutions (Exxon) 601 North McDowell Blvd

601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

## Dissolved Volatile Gases by Method RSK 175 Modified Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (MNL0521-01) Water	Sampled: 12/15/04 17:50	Received:	12/16/04	17:35			·		
Methane	ND	0.0010	mg/l	1	4120327	12/23/04	12/23/04	RSK 175	
MW3 (MNL0521-02) Water	Sampled: 12/15/04 18:40	Received:	12/16/04	17:35					
Methane	2.8	0.020	mg/l	20	4120327	12/23/04	12/23/04	RSK 175	
MW4 (MNL0521-03) Water	Sampled: 12/15/04 17:20	Received:	<b>12/16/0</b> 4	17:35					
Methane	ND	0.0010	mg/l	I	4120327	12/23/04	12/23/04	RSK 175	
MW5 (MNL0521-04) Water	Sampled: 12/15/04 18:20	Received:	<b>12/16/0</b> 4	17:35					
Methane	1.6	0.020	mg/l	20	4120327	12/23/04	12/23/04	RSK 175	
MW8 (MNL0521-05) Water	Sampled: 12/15/04 18:10	Received:	<b>12/16/0</b> 4	17:35					
Methane	ND	0.0010	mg/l	1	4120327	12/23/04	12/23/04	RSK 175	<del> </del>
MW10 (MNL0521-06) Water	Sampled: 12/15/04 12:05	Received	: 12/16/0	<b>17:35</b>					
Methane	0.97	0.010	mg/l	10	4120327	12/23/04	12/23/04	RSK 175	
MW12 (MNL0521-07) Water	Sampled: 12/15/04 13:50	Received	: 12/16/0	4 17:35					
Methane	ND	0.0010	mg/I	1	4120327	12/23/04	12/23/04	RSK 175	
MW14 (MNL0521-08) Water	Sampled: 12/15/04 15:00	Received	: 12/16/0	4 17:35					
Methane	ND	0.0010	mg/l	1	4120327	12/23/04	12/23/04	RSK 175	·
MW15 (MNL0521-09) Water	Sampled: 12/15/04 19:00	Received	: 12/16/0	17:35			•		
Methane	ND	0.0010	mg/l	1	4120327	12/23/04	12/23/04	RSK 175	





Environmental Resolutions (Exxon) 601 North McDowell Blvd.

Petaluma CA, 94954

Project: Former Exxon 7-0276 Project Number: 7-0276

Project Manager: Rob Saur

MNL0521 Reported: 01/06/05 17:08

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Evaluation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4L20012 - General Preparation				_						
Blank (4L20012-BLK1)				Prepared	& Analyze	ed: 12/17/	n4		<del></del>	<del></del>
Phosphate (Ortho) as P	ND	0.005	mg/l			12 177	<del></del>			
LCS (4L20012-BS1)				Prepared a	& Analyze	ed: 12/17/	<b>0</b> 4			
Phosphate (Ortho) as P	0.225	0.010	mg/l	0.250		90	80-120			<del></del>
Matrix Spike (4L20012-MS1)	Sou	rce: MNL05	21-07	Prepared a	& Analyze	ed: 12/17/	<b>0</b> 4			
Phosphate (Ortho) as P	0.354	0.010	mg/l	0.250	0.11	98	75-125			
Matrix Spike Dup (4L20012-MSD1)	Sou	rce: MNL05	21-07	Prepared a	& Analyza	-d· 12/17/	na .			
Phosphate (Ortho) as P	0.364	0.010	mg/l	0.250	0.11	102	75-125	3	20	
Batch 4L21017 - General Preparation									~~	
Blank (4L21017-BLK1)	<del> </del>			Prepared o	& Analyze	ed: 12/18/	 na			
Sulfide	ND	0.60	mg/l			<u> </u>	<u> </u>			
LCS (4L21017-BS1)				Prepared a	& Analyza	ed: 12/18/	n4			
Sulfide	9.30	1.0	mg/l	9.95		93	80-120			<del></del>
Matrix Spike (4L21017-MS1)	Sou	rce: MNL05	21-01	Prepared of	& Analyza	ed: 12/18/	34			
Sulfide	10.7	1.0	mg/l	9.95	ND	108	80-120	· .		
Matrix Spike Dup (4L21017-MSD1)	Sou	rce: MNL05	21-01	Prepared &	& Analyze	ed: 12/18//	<b>1</b> 4			
Sulfide	10.9	1.0	mg/I	9.95	ND	110	80-120	2	20	
Batch 4L21024 - General Preparation										
Blank (4L21024-BLK1)				December	P- A 1	J. 10/15/				
Total Dissolved Solids	ND	5	mg/l	Prepared a	× Anaiyze	a: 12/17/0	J4			





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Evaluation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4L21024 - General Preparation										
LCS (4L21024-BS1)			-	Prepared	& Analyze	ed: 12/17/	04			
Total Dissolved Solids	505	10	mg/l	500	· ·	101	96-106			
Matrix Spike (4L21024-MS1)	Sour	ce: MNL05	07-01	Prepared	& Analyza	ed: 12/17/	04			
Total Dissolved Solids	860	20	mg/l	500	330	106	80-120			
Matrix Spike Dup (4L21024-MSD1)	Sour	ce: MNL05	07-01	Prepared a	& Analyze	ed: 12/17/	04			
Total Dissolved Solids	850	20	mg/l	500	330	104	80-120	1	20	
Batch 4L22031 - General Preparation										
Blank (4L22031-BLK1)		-		Prepared	& Analyze	ed: 12/22/	04			<del></del>
Ammonia as N	ND	0.13	mg/l	<u>-</u>						<u> </u>
LCS (4L22031-BS1)				Prepared	& Analyze	ed: 12/22/	04			
Ammonia as N	10.5	0.25	mg/l	10.0		105	90-110			
Matrix Spike (4L22031-MS1)	Sour	ce: MNL05	21-01	Prepared	& Analyze	ed: 12/22/	04			
Ammonia as N	10.5	0.25	mg/l	10.0	ND	105	90-110		<del></del>	
Matrix Spike Dup (4L22031-MSD1)	Sour	ce: MNL05	21-01	Prepared	& Analyze	ed: 12/22/	04			
Ammonia as N	10.5	0.25	mg/I	10.0	ND	105	90-110	0	20	<del></del>
Batch 4L29014 - General Preparation			_							
Blank (4L29014-BLK1)			Prepared	& Analyza	ed: 12/17/	04				
Nitrite+Nitrate as N	ND	0.050	mg/l				<u>~·</u>			





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Evaluation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4L29014 - General Preparation			_							
LCS (4L29014-BS1)				Prepared a	& Analyze	ed: 12/17/	04			
Nitrite+Nitrate as N	3.60	0.10	mg/l	3.78		95	83-117			<del></del>
Matrix Spike (4L29014-MS1)	Sou	rce: MNL05	21-06	Prepared a	& Analyza	ed: 12/17/	04			
Nitrite+Nitrate as N	38.0	1.0	mg/l	37.8	0.30	100	83-117			
Matrix Spike Dup (4L29014-MSD1)	Sou	rce: MNL05	21-06	Prepared a	& Analyze	ed: 12/17/	04			
Nitrite+Nitrate as N	37.2	1.0	mg/l	37.8	0.30	98	83-117	2	3	
Batch 4L30010 - General Preparation										
Blank (4L30010-BLK1)				Prepared a	& Analyze	ed: 12/29/	04		<del></del>	
Total Phosphorous	ND	0.005	mg/l			<u> </u>	<del></del> -			
LCS (4L30010-BS1)				Prepared a	& Analyze	ed: 12/29/	04			
Total Phosphorous	0.258	0.010	mg/l	0.250	·	103	96-114			
Matrix Spike (4L30010-MS1)	Sou	rce: MNL05	21-01	Prepared a	& Analyze	ed: 12/29/	04			
Total Phosphorous	0.600	0.020	mg/l	0.250	0.36	96	96-114	·	<del></del>	
Matrix Spike Dup (4L30010-MSD1)	Sou	rce: MNL05	21-01	Prepared a	& Analvze	ed: 12/29/	04			
Total Phosphorous	0.608	0.020	mg/l	0.250	0.36	99	96-114	1	17	





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Spike

Source

%REC

Project Number: 7-0276 Project Manager: Rob Saur

Evaluation

MNL0521 Reported: 01/06/05 17:08

RPD

#### Anions by EPA Method 300.0 - Quality Control Sequoia Analytical - Morgan Hill

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 4L29014 - General Preparation										
Blank (4L29014-BLK1)	Prepared & Analyzed: 12/17/04									
Sulfate as SO4	ND	0.25	mg/l							
Nitrate as NO3	ND	0.25	u							
LCS (4L29014-BS1)				Prepared						
Sulfate as SO4	9.55	0.50	mg/l	10.0		96	90-110			
Nitrate as NO3	9.10	0.50	ti	10.0		91	90-110			
Matrix Spike (4L29014-MS1)	Source: MNL0521-06			Prepared	& Analyz	ed: 12/17/				
Nitrate as NO3	96.9	5.0	mg/l	100	0.48	96	80-124		· -	
Sulfate as SO4	106	5.0	п	100	19	87	72-140			
Matrix Spike Dup (4L29014-MSD1)	Source: MNL0521-06		Prepared & Analyzed: 12/17/04							
Sulfate as SO4	102	5.0	mg/l	100	19	83	72-140	4	10	
Nitrate as NO3	95.0	5.0	17	100	0.48	95	80-124	2	10	





601 North McDowell Blvd.

Project: Former Exxon 7-0276

MNL0521 Reported: 01/06/05 17:08

Petaluma CA, 94954

Project Number: 7-0276 Project Manager: Rob Saur

## Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control Sequoia Analytical - Petaluma

Analyte	Result	Evaluation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120512 - General Preparation										
Blank (4120512-BLK1)				Prepared:	12/27/04	Analyzed:	12/29/04			
Total Kjeldahl Nitrogen	ND	0.25	mg/l							
LCS (4120512-BS1)				Prepared:	12/27/04	Analyzed:	12/29/04			
Total Kjeldahl Nitrogen	4.49	0.50	mg/l	5.00		90	80-120			
Matrix Spike (4120512-MS1)	Source: P412315-01-			Prepared:	12/27/04	Analyzed:	12/29/04			
Total Kjeldahl Nitrogen	4.85	0.50	mg/I	5.00	0.43	88	75-125			
Matrix Spike Dup (4120512-MSD1)	Source: P412315-01			Prepared:	12/27/04	Analyzed:	12/29/04			
Total Kjeldahl Nitrogen	5.23	0.50	mg/l	5.00	0.43	96	75-125	8	20	





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

## Dissolved Volatile Gases by Method RSK 175 Modified - Quality Control Sequoia Analytical - Sacramento

Analyte	Result	Evaluation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4120327 - RSK 175							-		<u> </u>	
Blank (4120327-BLK1)			Prepared & Analyzed: 12/23/04							
Methane	ND	0.00056	mg/l	<u>-</u>					·	<del></del>
LCS (4120327-BS1)			Prepared & Analyzed: 12/23/04							
Methane	0.0823	0.0010	mg/l	0.0942		87	50-150			
Matrix Spike (4120327-MS1)	Source: S412469-01			Prepared	& Analyz	ed: 12/23/				
Methane	0.0713	0.0010	mg/l	0.0942	ND	76	50-150			
Matrix Spike Dup (4120327-MSD1)	Sou	Source: S412469-01			Prepared & Analyzed: 12/23/04					
Methane	0.0664	0.0010	mg/l	0.0942	ND	70	50-150	7	20	<del> </del>





601 North McDowell Blvd. Petaluma CA, 94954 Project: Former Exxon 7-0276

Project Number: 7-0276 Project Manager: Rob Saur MNL0521 Reported: 01/06/05 17:08

#### Notes and Definitions

HT-04 This sample was analyzed beyond the EPA recommended holding time.

HT-03 This sample was extracted beyond the EPA recommended holding time.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference